AVerMedia®

AVerDiGi SEB3104H

User Manual

Oct. 2009

FCC NOTICE (Class B)

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Federal Communications Commission Statement

NOTE- This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by tuning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

European Community Compliance Statement (Class B)

This product is herewith confirmed to comply with the requirements set out in the Council Directives on the Approximation of the laws of the Member States relating to Electromagnetic Compatibility Directive 2004/108/EC.

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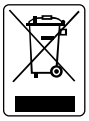

The mark of Crossed-out wheeled bin indicates that this product must not be disposed of with your other household waste. Instead, you need to dispose of the waste equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. For more information about where to drop off your waste equipment for recycling, please contact your household waste disposal service or the shop where you purchased the product.

Battery Safety Information

- Store the batteries in a cool dry place.
- Do not dispose of used batteries in domestic waste. Dispose of batteries at special collection points or return to point of sale if applies.
- Remove the batteries during long periods of non-use.
- Do not mix old and new batteries.
- Do not mix different types of batteries: alkaline, standard (carbon-zinc) or rechargeable (nickel-cadmium).
- Do not dispose of batteries in a fire. The batteries may explode or leak.
- Never short circuit the battery terminals.

WARNING

TO REDUCE RISK OF FIRE OR ELECTRIC SHOCK, DO NOT EXPOSE THIS APPLIANCE TO RAIN OR MOISTURE

CAUTION

IF THERE IS ANY DAMAGE, SHORTAGE OR INAPPROPRIATE ITEM IN THE PACKAGE, PLEASE CONTACT WITH YOUR LOCAL DEALER. WARRANTY VOID FOR ANY UNAUTHORIZED PRODUCT MODIFICATION

NOTICE

- INFORMATION IN THIS DOCUMENT IS SUBJECT TO CHANGE WITHOUT NOTICE.
- THE INFORMATION CONTAINED HEREIN IS TO BE CONSIDERED FOR REFERENCE ONLY.

LIGHTNING WARNING

- TO AVOID THE LIGHTNING STRIKE, STRONGLY SUGGEST INSTALLING THE LIGHTNING ROD AT LIGHTNING FREQUENTLY AREA.
- FOR ADDED PROTECTION, UNPLUG THE DVR UNIT DURING THE LIGHTNING STORM. THIS MAY PREVENT TO DAMAGE THE DVR UNIT DUE TO THE LIGHTNING.

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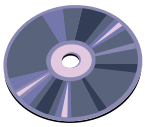
Chapter 1 Introduction

1.1 Package Content

(1)

(2)



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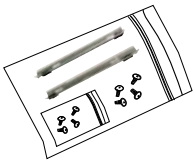


(6)

(7)

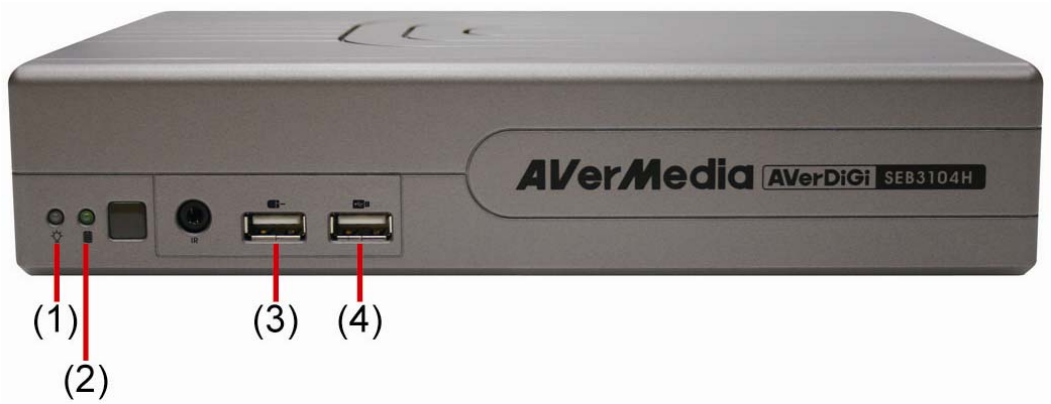
- ☐ (1) SEB3104H unit
- ☐ (2) Quick Installation Guide
- ☐ (3) Software CD (User Manual included)
- ☐ (4) Power adaptor
- ☐ (5) Power Cord
  * The power cord varies depending on the standard power outlet of the country where it is sold.
- ☐ (6) Internal HDD holder (8 screws are included)
- ☐ (7) AVerMedia USB optical mouse

If there is any damage, shortage or inappropriate item in the package contents, please contact with local dealer

1.2 Features

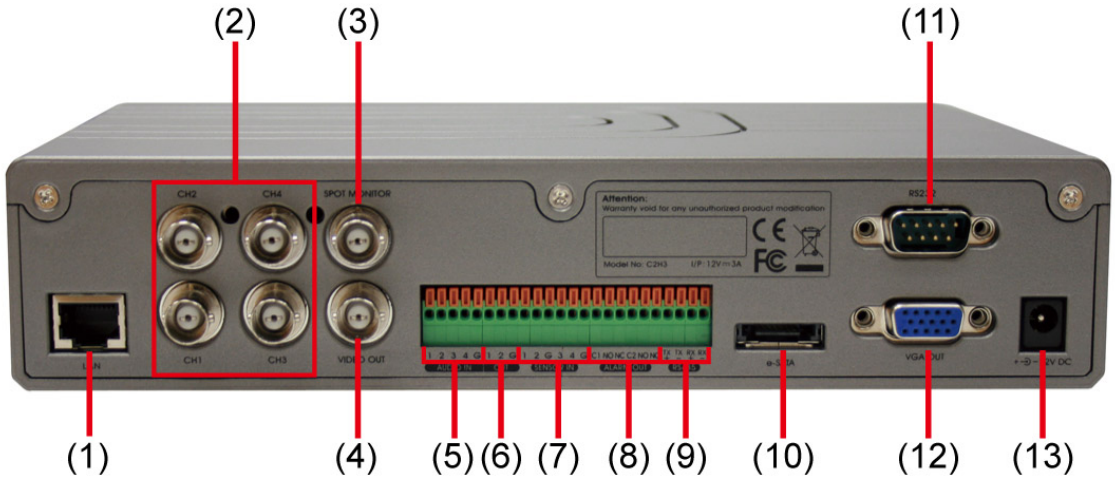
- **Key Features**
  - 4CH real-time recording and display
  - 1CH TV and VGA outputs synchronously
  - Individual adjust channel frame rate and resolution
  - H.264 H/W compression
  - Instinctive and user-friendly Graphic User Interface (GUI)
  - Support PTZ control
  - Fully functional control utilizing Mouse (included)
  - Grant operation function by Individual Users
  - 4 sensors in/ 2 relays out
  - Pre-alarm and post-alarm recording
  - Sensor/ Motion/ Smart/ Always or manual recording
  - 4CH audio recording
  - Advanced Search and alarm features
  - Virtual keyboard supported
  - Remote Software Integration: CM3000, Remote Console, WebViewer, PDAViewer, and JavaViewer
- **Recording Resolution**
  - Full D1: 720x480 / 720X576 (NTSC/PAL)
  - CIF: 352x240 / 352X288 (NTSC/PAL)
  - Half D1: 720x240 / 720x288(NTSC/PAL)
- **Recording Frame Rate**
  - Full D1: 120 / 100 fps (NTSC/PAL)
  - CIF: 120 / 100 fps (NTSC/PAL)
  - Half D1: 120 / 100 fps(NTSC/PAL)
- **Recording Mode**
  - Always / Sensor/ Motion/ Smart recording
  - Auto recycle recording
  - Auto record enabling
- **Schedule**
  - Schedule recording (set by week)
  - Calendar based schedule
  - Schedule can be set by specific date for holiday
- **Remote Access**
  - Support CMS (CM3000)
  - Support Remote Console
  - Support PDAViewer (with video & audio), JavaViewer
  - Support WebViewer
  - DDNS function
- **Playback**
  - Video search by visual image/ event log/ calendar
  - Visual search break down from dates, hours, minutes, to seconds
  - Converting files to DVR format enabling to playback on UPC(USB Playback Console)
  - Cut selected segment before converting into AVI
  - Built-in player to playback video
  - Playback on any PC with Windows 2000/XP/Vista
- **Backup**
  - iEnhance provides highest-level video quality
  - Easy to backup by choosing channels and hours

1.3 Front Panel



Name	Function
(1) System Power indicator	System power status indicators. Indicate running state of system. Lights when the system is running.
(2) HDD indicator	When DVR system is recording, the light will keep flashing.
(3) USB 1.1 port	For connecting USB mouse.
(4) USB 2.0 port	For connecting USB device, ex: USB pen drive, external hard disk…and so on. The USB storage device must be in FAT32 format.

1.4 Back Panel



Name	Function
(1) LAN Port	For Ethernet connection
(2) CH1~ 4	Input the video camera signal and display it on channel 1~ 4
(3) Spot Monitor	Display video cycle on the Spot monitor when receive a alarm video
(4) Video Out	Output the video signal to TV
(5) Audio In	Input the audio signal to audio input device such as microphone
(6) Audio Out	Output the audio signal to audio output device such as speaker
The audio input and output device has its own power supply is necessary.	
(7) Sensor In	Support up to 4 sensor devices
(8) Relay Out	Support 2 relay devices (Relay: 1A @ 125V AC/30V DC)
(9) RS485	For PTZ camera connection (also see 1.5.4)
(10) eSATA interface	For connecting with eSATA storage device
(11) RS232 port	For future function using
(12) VGA Out	Output the video signal to a CRT or LCD monitor
(13) Power Plug	Connect the power cord into this port (12V DC)

1.4.1 Setting Up the DVR Unit

1.4.2 Installing the Hard Disk

The DVR unit allows user to install 1 SATA hard disks inside the DVR unit.

For hard disk spec, please referring to http://www.avermedia.com/AVerDiGi/Product/ → AVerDiGi EB Series → AVerDiGi SEB3104H → Hardware Recommendations

The “compatible hard disks” indicated in the above recommendation list only means that these commercially available hard disks were tested with AVerMedia® products and functioned well under normal operation conditions. AVerMedia® does not guarantee or provide warranties, explicitly, implied or statutory with respect to the reliability of the hard disk function or its compatibility. In no event AVerMedia® shall be liable for damages, with respect to any business interruption of clients, lost profits, loss of programs or other data on your information handling system or otherwise. This includes direct, indirect, incidental, special, or consequential damages, resulting from the incompatibility caused by the usage of these hard disks, even if AVerMedia® has expressly advised about the risk of such damages. The entire risk arising out of the use of any information attached here with is borne by the recipient.

Follow the illustrated instructions below to install the hard disk:

1. Loosen all screws

2. Push the cover backward and lift

3. Secure the brackets on the hard disk

4. Connect the end of the SATA cable and the power connector to the hard disk

5. Secure the hard disk inside the unit then place unit cover

6. Push the cover forward and secure the cover

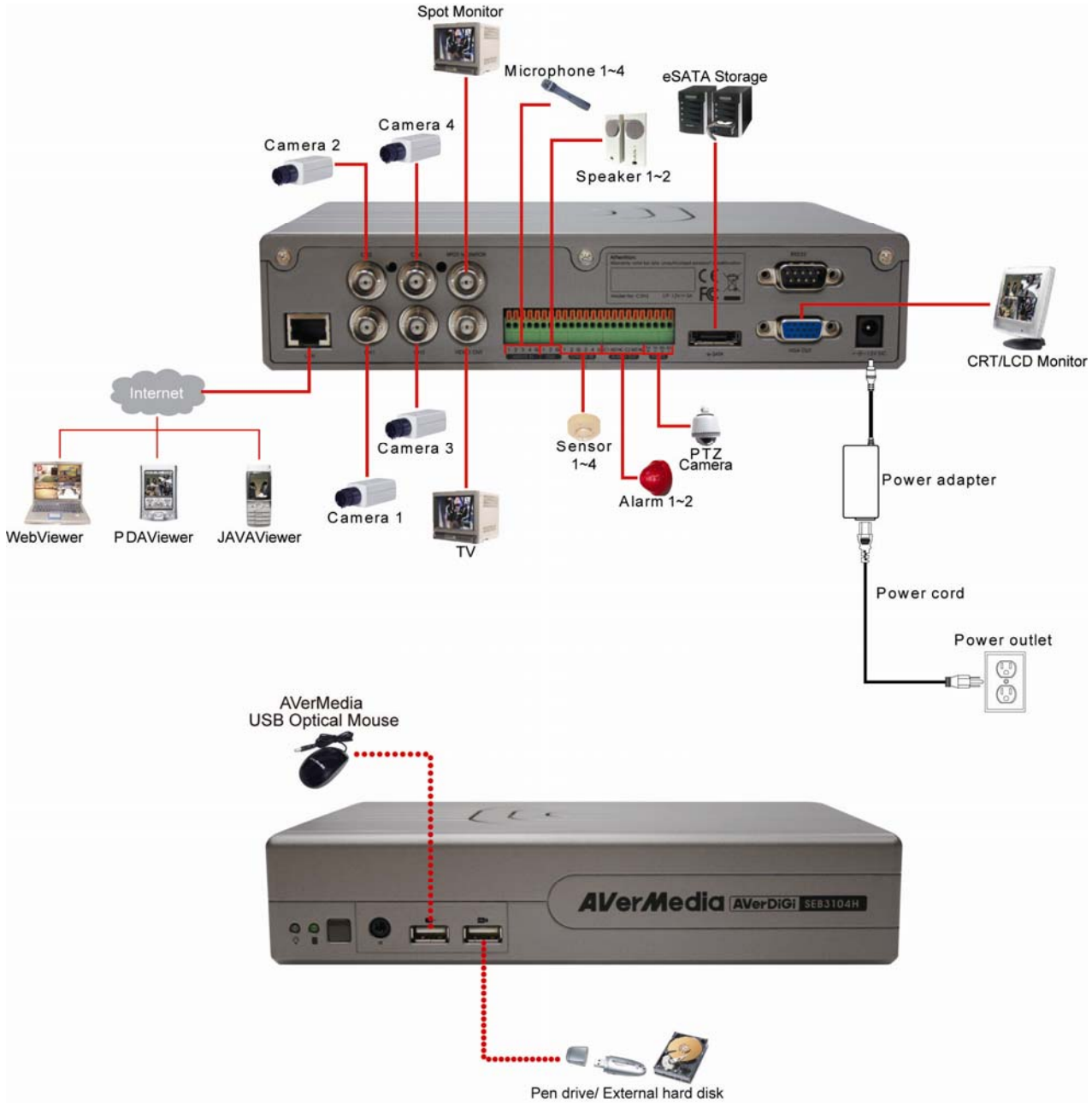
7. You may now connect all the cables. When the power is connected, the Power LED light turns on

1.4.3 Connecting Devices

The back panel of the DVR unit, user can connect up to 4 cameras of analog camera and 4 audio in device(ex: microphone) and 2 audio out device(ex: speaker). The DVR unit also can connect 4 sensor devices, 2 alarm devices, and output video to a TV and CRT/LCD monitor at the same time. The video of the alarm can be display on the spot monitor.

The USB port of the front panel can connect with USB mouse to operate the DVR system.

For backup recorded video, plugging the pen drive or external hard disk through USB port, and then, use the bundled software enables user to transfer, playback and segment the video. Follow the illustration below to make the connection:

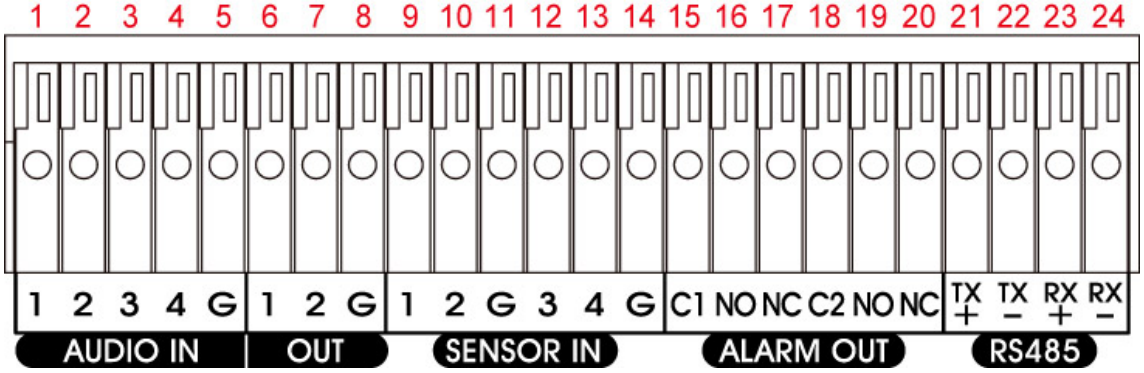


Pen drive and external hard disk must be FAT32 format.

All connected devices have their own power supply are necessary.

1.5 Audio, Sensor, Relay and RS485 pinhole allocation

The Sensor and Alarm enable you to connect 4 sensor inputs, 2 relay outputs and 1 PTZ camera. Just connect the external sensor, relay, and PTZ camera pin directly to the pinhole. Check the table below and locate which pinhole is assigned to sensor input and relay output.



1.5.1 Audio In/Out Pin Definition

Number	Pin	Definition
1	1	Audio in signal
2	2	Audio in signal
3	3	Audio in signal
4	4	Audio in signal
5	G	Audio ground single
6	1	Audio out signal
7	2	Audio out signal
8	G	Audio ground single

1.5.2 Sensor Pin Definition

Number	Pin	Definition
9	1	Sensor 1 signal
10	2	Sensor 2 signal
11	G	Sensor ground
12	3	Sensor 3 signal
13	4	Sensor 4 signal
14	G	Sensor ground

1.5.3 Relay Pin Definition

Number	Pin	Definition
15	C1	Relay Common 1
16	NO	Relay Normal Open
17	NC	Relay Normal Close
18	C2	Relay Common 2
19	NO	Relay Normal Open
20	NC	Relay Normal Close

1.5.4 RS485 Pin Definition

When connect PTZ camera through RS485 interface, please refer to the following pin definition to connect the DVR and PTZ.

Number	Pin	DVR site	PTZ site
21	TX+	RS485 TX+ signal	RS485 RX+ signal
22	TX-	RS485 TX- signal	RS485 RX- signal
23	RX+	RS485 RX+ signal	RS485 TX+ signal
24	RX-	RS485 RX- signal	RS485 TX- signal

Chapter 2 Using the DVR Software

Please use the **mouse** with **virtual keyboard** to configure DVR setting.

2.1 First Time Using the DVR Unit

Step 1. Login to the DVR System

1. Connect the cameras
2. Connect the mouse to DVR unit(through USB port on front panel)
3. Power on the DVR unit.
4. The preset screen (color bar) will show up and wait for preview screen to display (about 60 seconds).
5. When preview screen show up, please wait for the authorization dialog pop-up. For security purpose, enter the User ID (default is **Admin**; fist letter is capital) and Password (default is **111111**) to login the DVR system.

6. Click to call out virtual keyboard to enter the ID and password.
7. After login, the preview screen will show up.

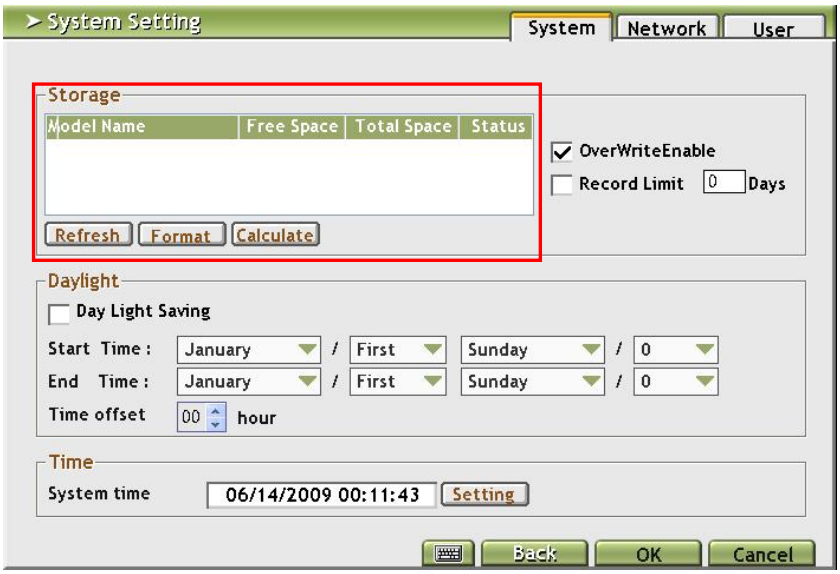
Preview Mode

Step 2. Formatting the Hard Disk

The hard disk must be formatted before user can use it with DVR unit. Following the below steps to format the hard disk.

1. Click to call out **SETTING MENU**.

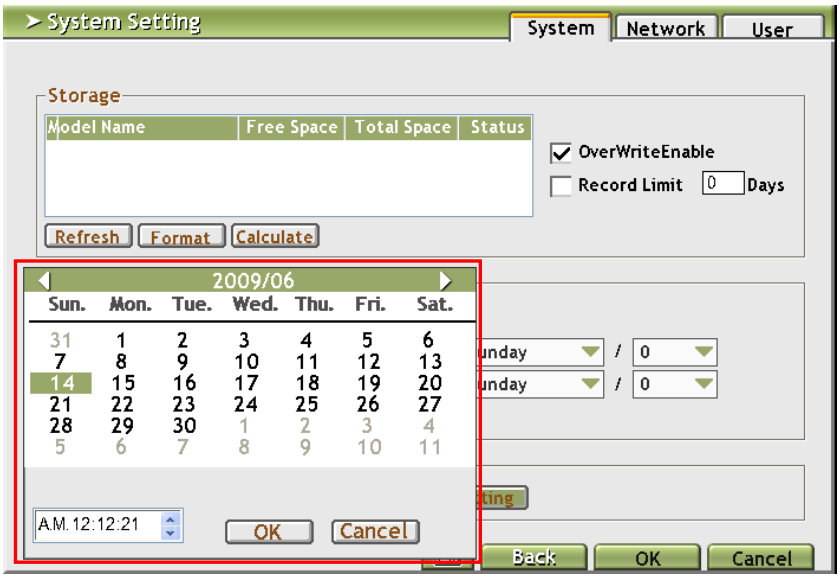
2. Click **System** → **System** and click **Next**.
3. Click **Refresh** button to detect the installed hard disk.
4. Select the detected hard disk, and then, click **Format** to start formatting.



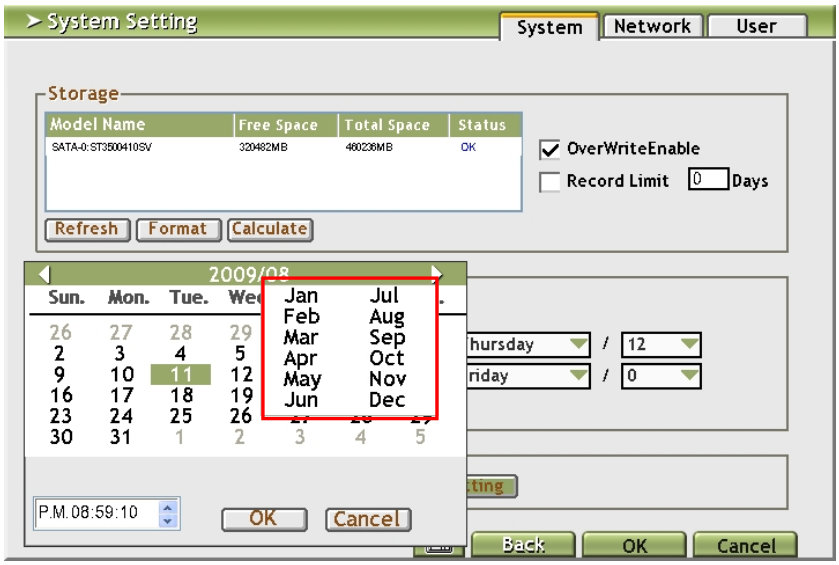
Step 3. Adjust the Date and Time

Setup the **Date** and **Time** in order to have correct system time and date. Following the below steps to setup date and time:

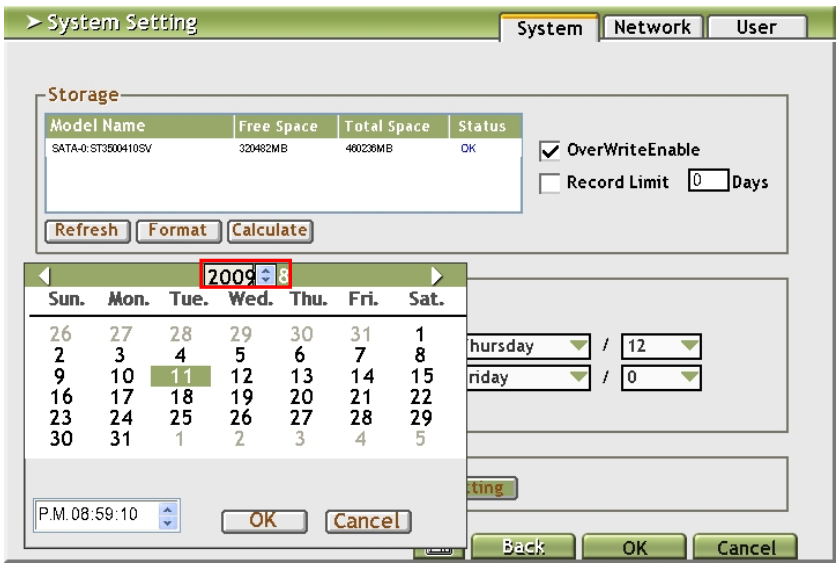
1. Click and select **System** → **System** tab and click **Next**.
2. In **Time** section, click **Setting** button of the **System Time**.



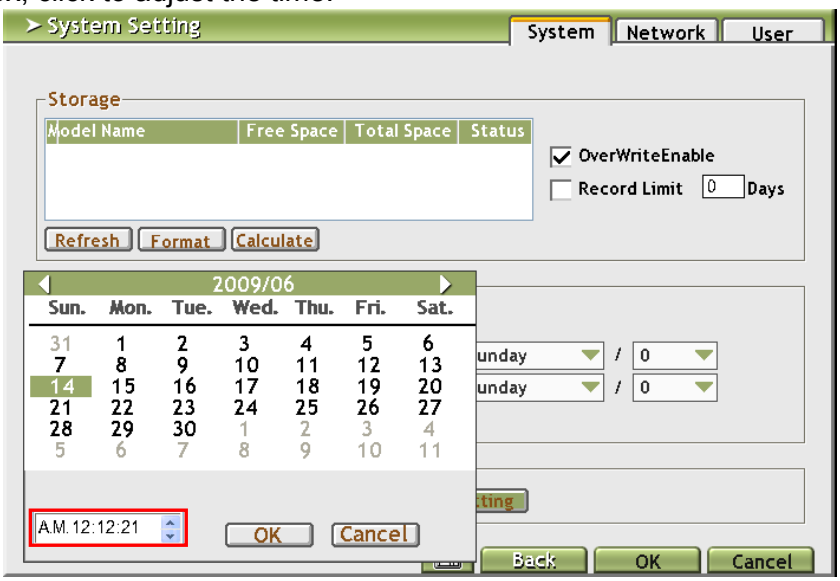
3. User can click the **Month** to select the month.



4. User can click the **Year** to select the year.



5. In the **Time** box, click to adjust the time.



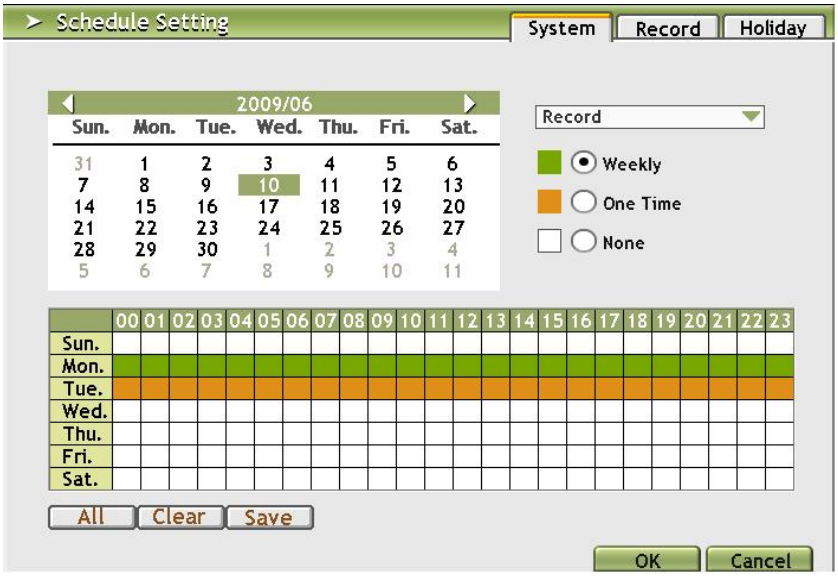
6. Click **OK** to save the setting.

Step 4. Setup Record Schedule

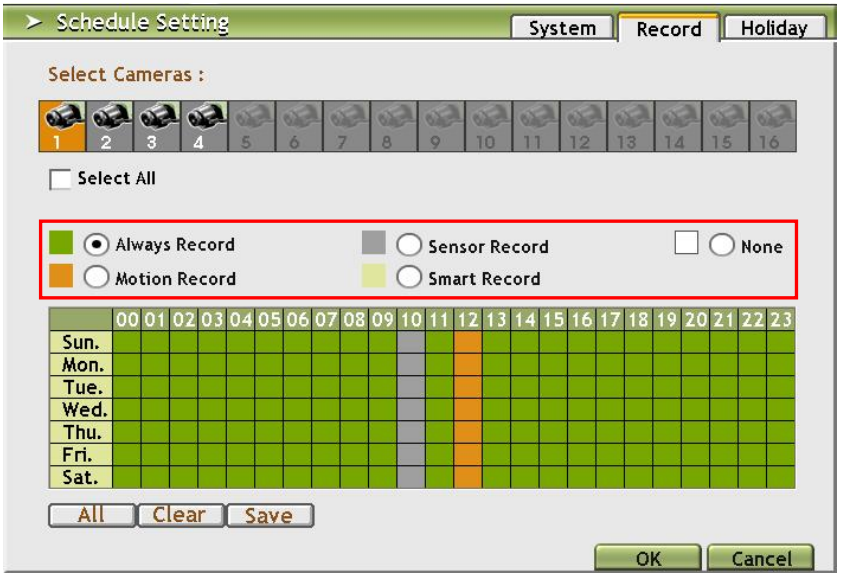
Setup the **Schedule** to record.

Without setting record schedule, the DVR system wouldn't start to record.

1. Click → **Setting** → **Schedule** → **System**
2. Select the date and type of record (Weekly, Month, or None).
3. And then, select the week day (Sun. ~ Sat.) and hours (00 ~ 23) by click the week day and hours table.
4. Click **Save**.



5. Click **Record** tab.
6. Select the record mode (**Always**, **Motion**, **Sensor**, or **Smart**).
7. And then, select the week day (Sun. ~ Sat.) and hours (00 ~ 23) by click the week day and hours table.
8. Click **Save** and **OK** to complete the record schedule setting.

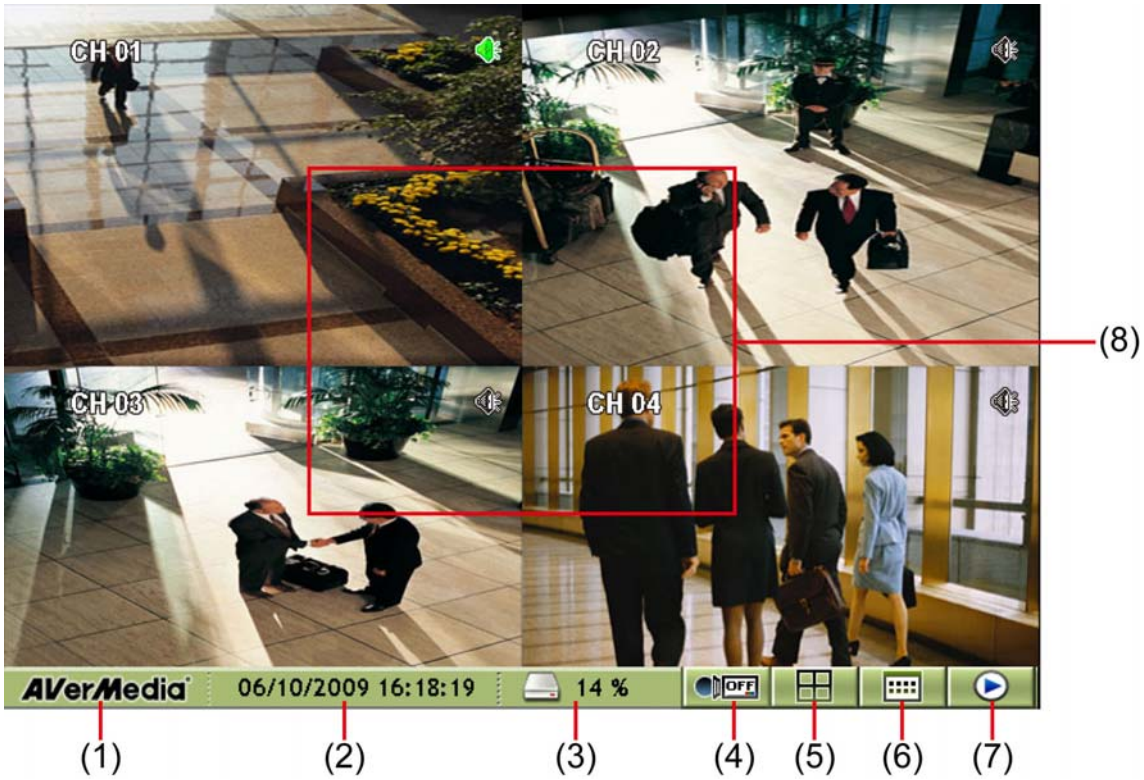


9. To start recording, click (record) button.

2.1.1 Using the Virtual Keyboard

Use the Virtual Keyboard and mouse to configure the DVR system. Just click or select the column and right-click to call out the virtual keyboard. For uppercase, click **Caps** button. To exit, click left-click anywhere on screen.

2.2 Familiarizing the Functions in Preview Mode



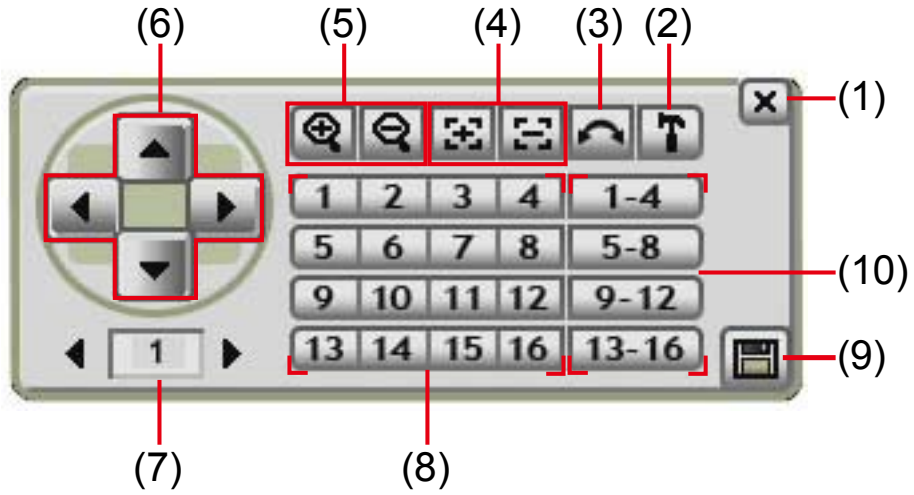
Name	Function
(1) Logout	- **Login:** Using different user account to login the DVR system. The **User ID** display the account is using now. - **Reboot:** To restart the DVR system.
(2) Status	Display recording date and time
(3) Hard disk capacity	Display the hard disk usage of capacity in percentage.
(4) Record	Start/stop video recording.
ⓘ	Recording schedule must be setup in order to record. Please refer to Chapter 3.4.2 to setup recoding schedule.
(5) Split screen mode	Select from 2 different split screen types to view all the camera or one camera on a single screen.
ⓘ	Click on channel can switch to full screen mode of the channel. Click again will switch back to previous screen mode.
(6) Setup menu	To call out system setup menu
(7) Playback	Switch to Playback mode. This allows you to view the recorded video file. (see also Chapter 2.3)
(8) Channel preview	To display live video of all channels

2.2.1 Using the PTZ Control Panel

User can use PTZ control panel to operate the PTZ camera in preview mode. Before to use it, please enable the PTZ camera first (see also Chapter 3.2.3)
When PTZ camera is enabled and set, the PTZ control icon will show on the channel screen.

Click on the PTZ control icon to call out PTZ control panel.

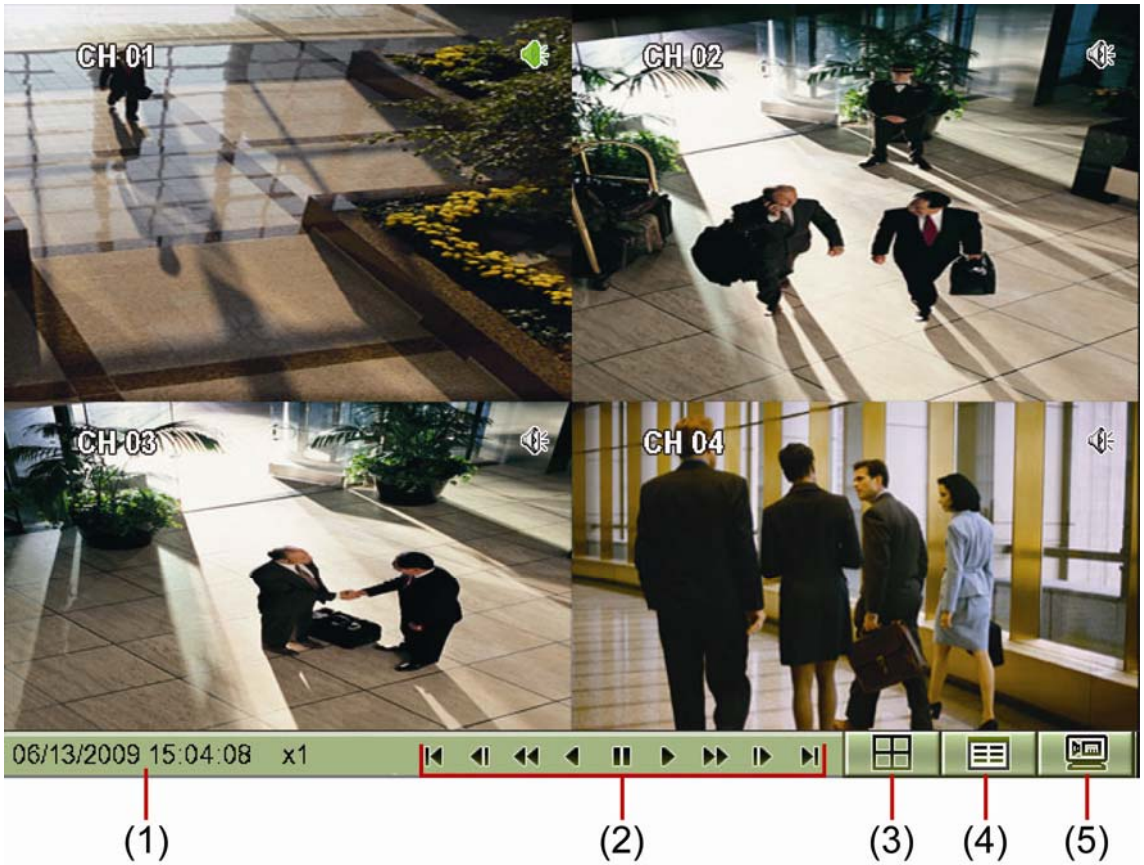
2.2.2 Familiarizing the Buttons in PTZ Control Panel



Name	Function
(1) Close	Exit PTZ camera controller.
(2) Setup	Configure PTZ cameras (see also Chapter 3.2.3).
(3) Auto Pan	Operate the PTZ cameras automatically based on the selected camera group preset position number.
(4) Focus +/-	Adjust the focus manually to produce clear image.
(5) Zoom +/-	Zoom in and out the image.
(6) Direction buttons	Adjust and position the focal point of the PTZ camera.
(7) Camera lens speed controller	Adjust the moving speed of the PTZ camera lens.
(8) Camera preset position number	Move the PTZ camera to the preset point.
(9) Save Camera preset position	Save the PTZ camera preset position number. Select the camera and click the preset position number and save it.
(10) Group Auto Pan	Select to automatically operate PTZ camera in group.

2.3 Familiarizing the Functions in Playback Mode

Click **(playback)** button at the lower right corner of Preview mode user interface to switch to Playback mode.



The maximum decoding fps in D1 resolution is 60 fps. The playback speed is default in 1/2x when display in QUAD mode. In one channel display mode, the playback speed is in 1x (normal speed).

Name	Function
(1) Status	Display the recorded date, time and play speed.
(2) Playback Control Buttons	⏮ : Move at the beginning of the recorded video file. ⏴I: Go back to the previous frame. ⏪: To reduce the playback speed. When each time press ⏪, the speed will reduce 1/2 from original speed (16X, 8X, 4X, 2X, 1X, 1/2X, 1/4X, 1/8X, 1/16X). ⏴ : Wind back the recorded video file. ⏸ : Briefly stop playing the recorded video file. ⏵ : Play the recorded video file. Back to 1X playback speed when playback speed at faster or slower speed ⏩: To faster playback speed. When each time press ⏩, the speed will double the playback speed (1/16X,1/8X, 1/4X, 1/2X, 1X, 2X, 4X, 8X, 16X). I⏵ : Go to the next frame. ⏵1: Go to the end of the recorded video file.
(3) Split Screen Mode	Select from 2 different split screen type to playback the recorded video file of all the camera, or one camera over the other or alongside on a single screen.
(4) Playback menu	To call out playback menu(see also Chapter 2.3.1)
(5) Preview	Switch to Preview mode.

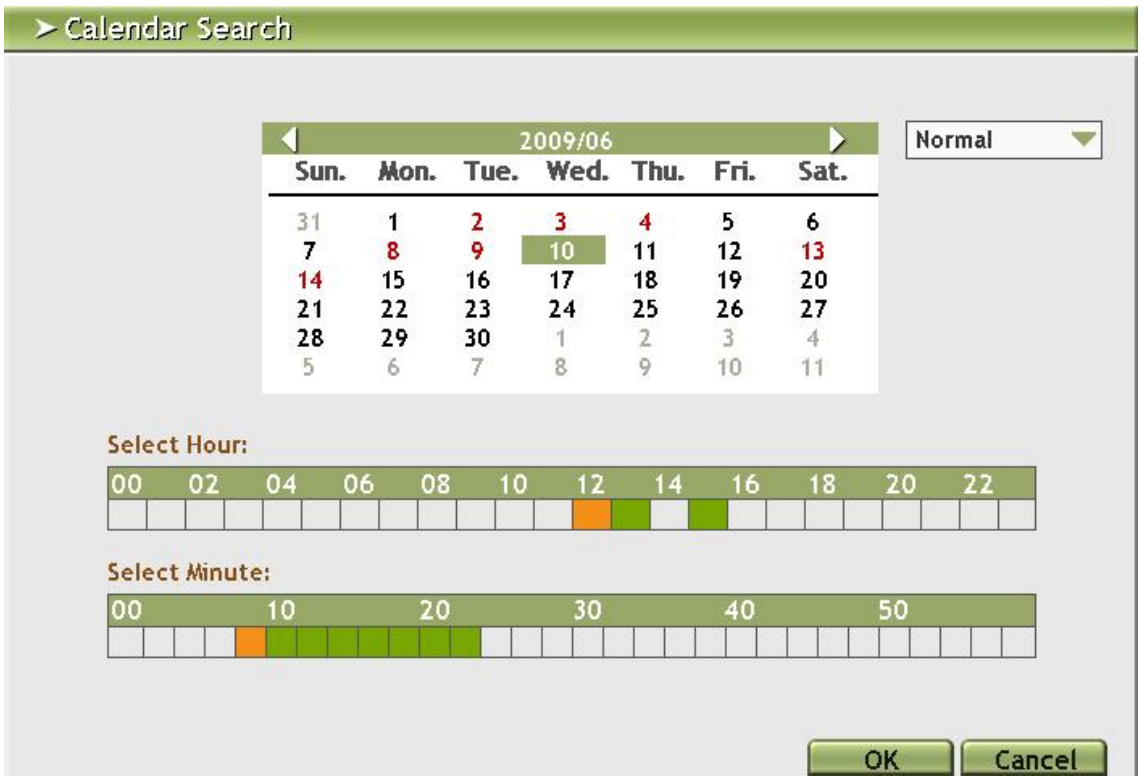
2.3.1 Familiarizing the Functions in Playback Menu

Click to call out the playback menu.

2.3.1.1 Select Playback File from Calendar

Select recorded file by date and time. Select the **Calendar** from Playback menu and calendar windows will show up. User can select the date, hour, and minute and click **OK** to playback.

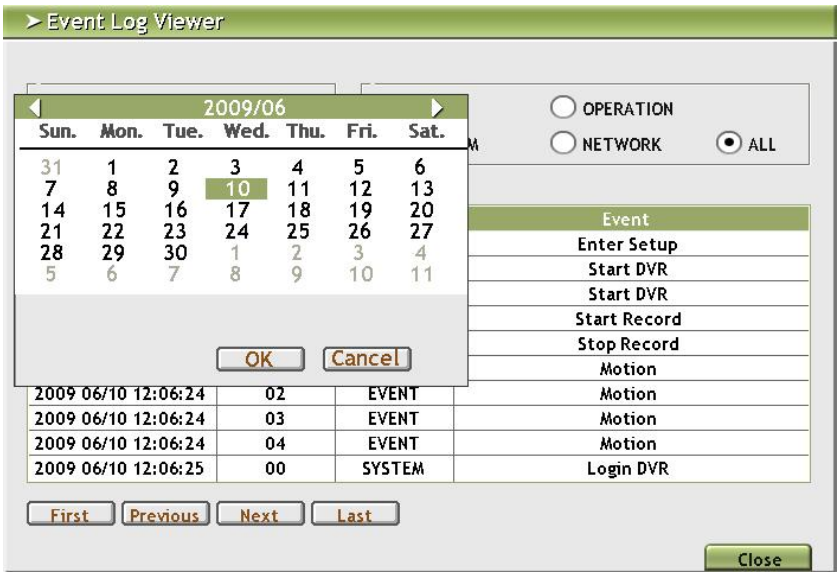
The orange color blocks mean the block is selected. The Green color blocks mean that hour or minute has recorded file.



2.3.1.2 Using the Event Log Viewer

Show the record of activities that take place in the system.

1. Click the **Event Log** from playback menu. The Event log viewer window will show up.
2. Click **Setting** to select the Date.



3. To filter the records, select and click the select button to display Event, System, Operation, Network or All.
4. Click **Next**, **Previous**, **First**, and **Last** button to go next, previous, first, or last page of event list.

2.3.1.3 To Search Using the Visual Search

Search from a specific camera by Date, Hour, Minute, and Second.

1. Click the **Visual Search** from playback menu. The Visual Search Setting window will show up.
2. In Visual Search Setting windows, select the **date** and **camera** and click **OK**.

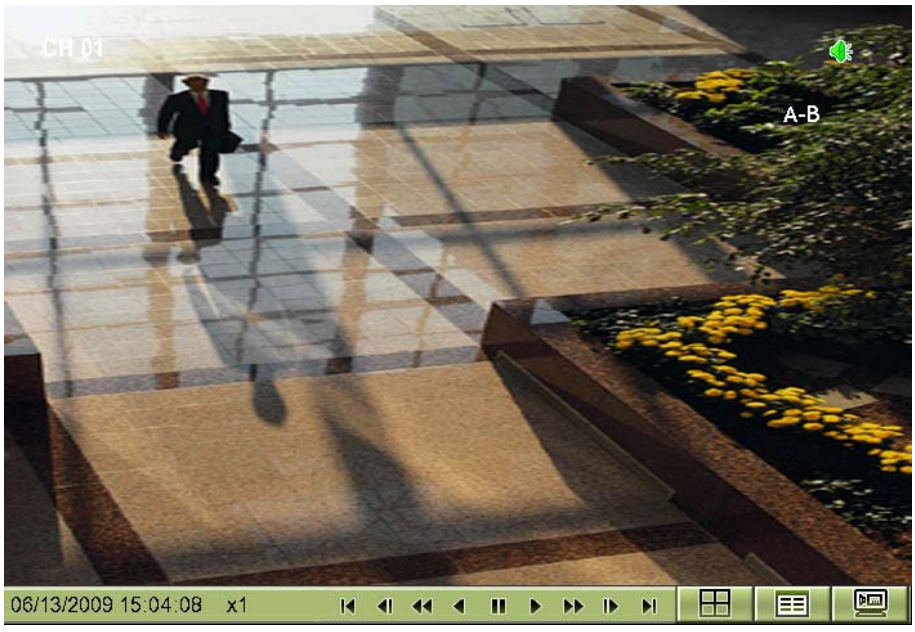
3. When a series of frames appear by date, click on the frame to display another series of frames and search by every Hour of that date, every Minute of that hour, every Second of that minute. To go back to previous time section, click ◀◀◀. Click ◀ ▶ to go to next or go back previous page in Hour, minute, and second select screen. To exit from the selected frame, click **Cancel**.

2.3.1.4 To Set a Video Segment and Save

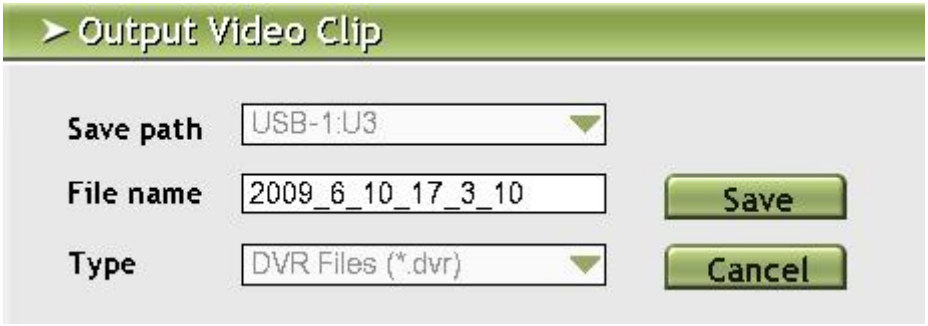
Keep a portion of the recorded video. Following the below steps to Set and Save the Wanted Portion of the Recorded Video

1. While playback, right-click on playback screen and the A point of video segment is set.
2. Right-click on playback screen again to set B point of video segment.

3. The DVR system will start repeat playback the video segment that user has set until user cancel the video segment. Right-click on playback screen will cancel the video segment.
4. To save the video segment, left-click on playback screen to switch to single screen mode.



5. Plug in the USB storage device.
6. Click and select **Segment** from playback menu.



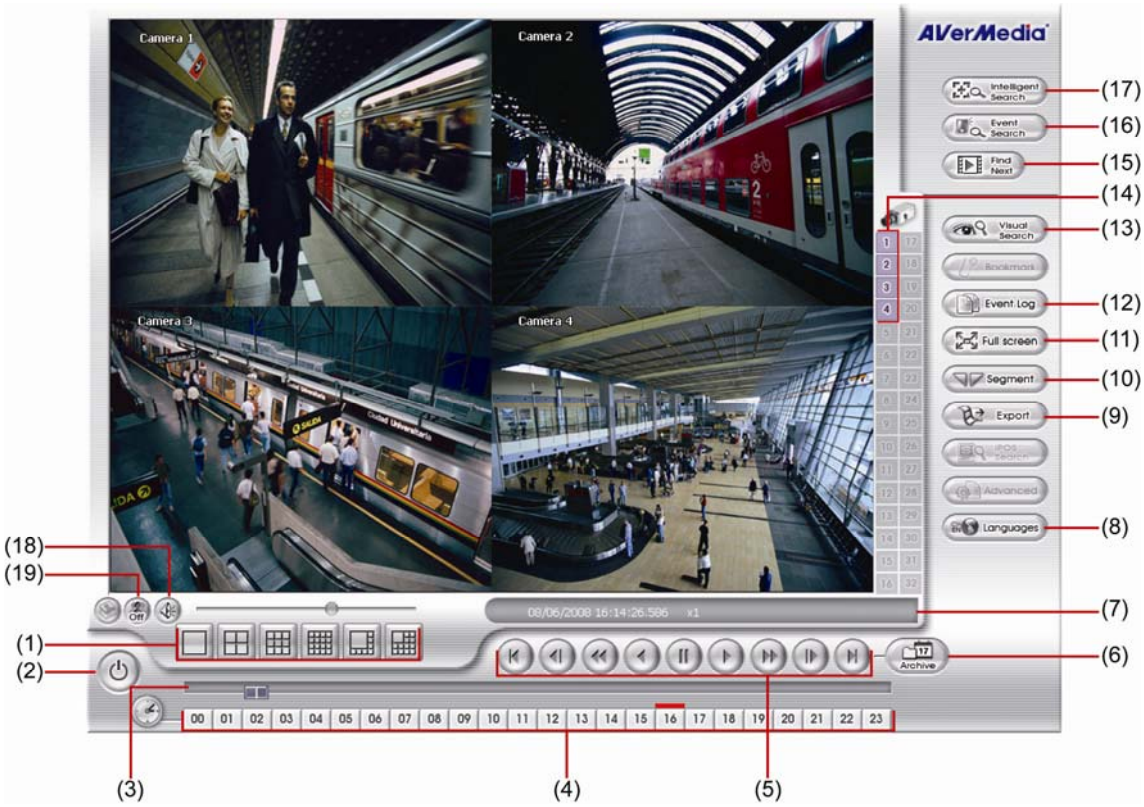
7. Click **Save** to output the video segment to USB storage device.
8. Qplayer application will be included in output video segment folder for playback(see also Chapter 2.4)

2.4 Playback Backup Video

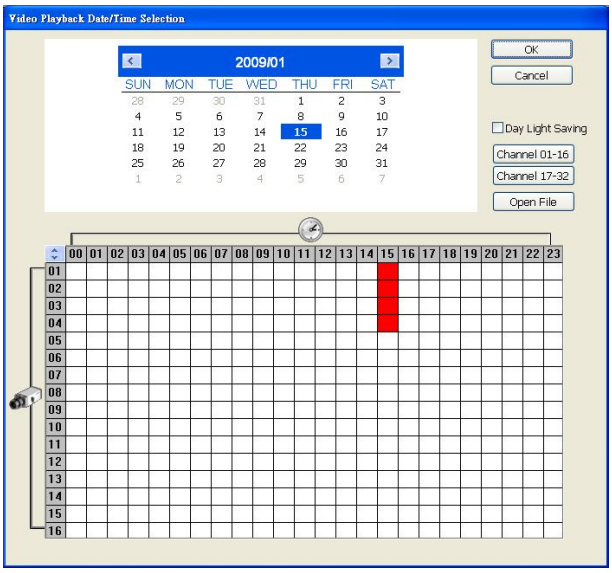
You can playback the backup files and output video segment by using QPlayer applications on the PC. When you back up the recorded file, QPlayer applications are automatically included in the backup folder. With QPlayer, it is the same as in Playback mode and supports 6 different split screen types to view all the video at the same time. The only difference is that there are no Preview and Playback buttons.

To run the application, go to backup folder and double-click QPlayer.

The QPlayer only support the *.dvr format.



Name	Function
(1) Split Screen Mode	Select from 6 different split screen type to playback the recorded video file of all the camera, or one camera over the other or alongside on a single screen.
	- If there are only 4 cameras, you won't be able to switch to 8, 9, 13, and 16 split screen mode. - To zoom in an area on the screen, **Right** click and **Drag** a square on the area you want to enlarge.
(2) Exit	Close the application.
(3) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(4) Hour Buttons	Select and click to playback the recorded video file on the specific time frame.
	The Hour buttons represent the time in 24-hour clock. The blue bar on top of the hour button indicates that there is a recorded video file on that period of time. While the red bar indicates that you are currently viewing the recorded video file.

Name	Function
(5) Playback Control Buttons	From left to right order: **Begin:** Move at the beginning of the recorded video file. **Previous:** Go back to the previous frame. **Slower:** To reduce the playback speed. When each time press slower button, the speed will reduce 1/2 from original speed (32X, 16X, 8X, 4X, 2X, 1X, 1/2X, 1/4X, 1/8X, 1/16X, 1/32X). **Rewind:** Wind back the recorded video file. **Pause:** Briefly stop playing the recorded video file. **Play:** To faster playback speed. When each time press faster button, the speed will double the playback speed (1/32X, 1/16X,1/8X, 1/4X, 1/2X, 1X, 2X, 4X, 8X, 16X, 32X). **Faster:** Play the recorded video file at the speed of 2x, 4x, 8x, 16x, or 32x. **Next:** Go to the next frame. **End:** Go to the end of the recorded video file.
(6) Archive	Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file. – Also, user can open the recorded file from certain location by click **OPEN FILE** button – Click **Channel 01~ 16** and **Channel 17 ~ 32** button to switch to different channel group of playback calendar. – Mark **Day Light Saving**, the playback calendar will show the available playback records during day light saving period. 

The numbers from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera ID. The blue colored column indicates that there is a recorded video file on that period of time. While the red colored column indicates on where to start playing the recorded video file.

(7) Status bar	Display the recorded date, time and play speed.
(8) Language	Switch to different UI tool tip's language
(9) Export	Export includes Snapshot, Print, and Output function. ■ **Snapshot:** Capture and save the screen shot either in *.jpg format. ■ **Print:** Print the screen shot. ■ **Output Video Clip:** Save the segmented file in *.mpg, *.avi, *.dvr format(see also Chapter 2.4.1.1).

Name	Function
(10) Segment	Keep a portion of the recorded video (see also Chapter 2.4.1.1).
(11) Full screen	View in full screen mode. To return, press the right button of the mouse or **ESC** on the keyboard or click the arrow icon. When you switch to full screen in multiple-screen mode, **Left** click to toggle to only display one of the video in the multiple-screen mode or all.
(12) Event Log	Show the record of activities that take place in the system.
(13) Visual Search	Search from a specific camera by Date, Hour, Minute, 10 Seconds and Second.
(14) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(15) Find Next	Search for the next event or changes in the motion detector frame. You can use this when you are using Intelligent Search or Event Search function.
(16) Event Search	Search from the recorded activities that take place in the system (i.e., Sensor, Motion, Video Loss, POS)
(17) Audio	Enable/disable audio sound.
(18) De-interlace	To enhance the video quality. Set the de-interlace mode to #1, if you are capturing motionless picture and #2, if it captures lots of movement.

2.4.1.1 To Cut and Save the Wanted Portion of the Recorded Video

1. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to start the cut. Then, click **Segment** to set the begin mark.

2. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to end the cut. Then, click **Segment** to set the end mark. To cancel segmentation or set the segment marks from the start, click Segment button again.

3. Click **Export >> Output** button to save the wanted clip.
4. In the **Save As** dialog box, locate on where you want to save the file, type the filename, and select the video format.

Chapter 3 Customizing the DVR System

In the Preview screen mode, click button to customize your DVR system. When the DVR setting menu appears, click the selection button that you want to configure.

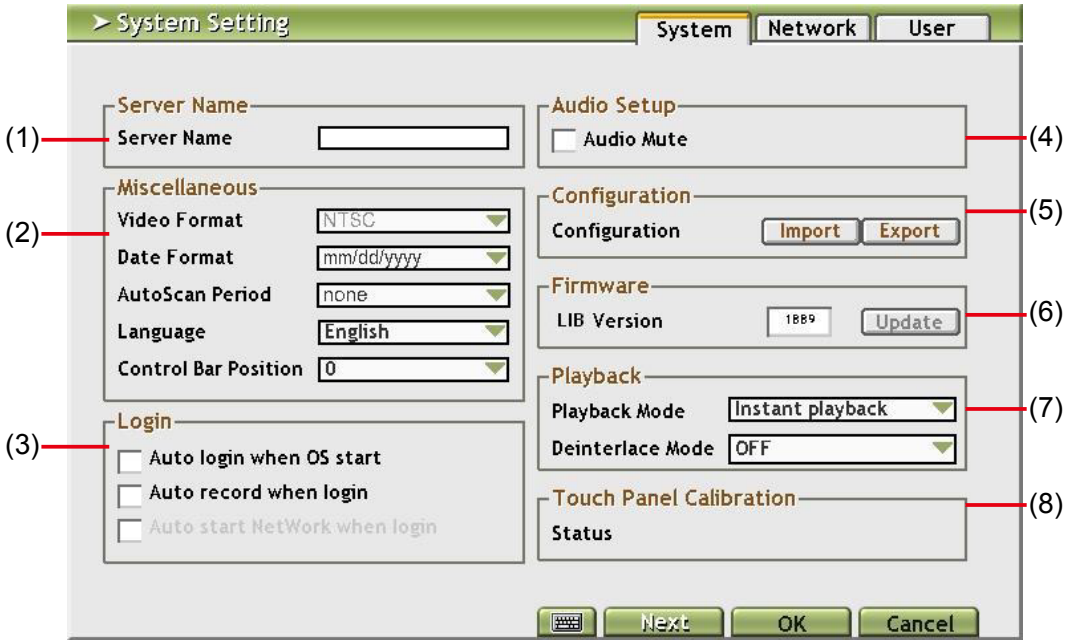
3.1 System Setup

In the System Setting dialog box, there are 3 tabs – **System**, **Network**, and **User**. Click the tab to configure it.

3.1.1 System Setup

Part I

Click **Next** to go to next setup page, click **OK** to accept the new settings, click **Cancel** to exit without save. Click or right-click on selected column to call out virtual keyboard for entering value in necessary columns.



(1) Server Name

Assign a name for the DVR unit. Alphabet letters and numbers only.

(2) Miscellaneous

- **Video Format:** display the video system according to your camera video system. If the video system setting is wrong, the video would appear abnormal.

- **Date Format:** Select the date format which wants to display in preview and playback mode
- **AutoScan Period:** Set the time gap of the Auto Scan function from 3 to 10 seconds. This automatically switches to the next video in cycle depending on the set time gap.
- **Lanaguage:** Customize the system to display the tool tips and dialogs based on the selected language. Default language is in English.

(3) Login

Enable the conditions in Login section you want the system to automatically carry out.

- **Auto login when OS start:** Automatically login to DVR system when DVR system is executed.
- **Auto record when login:** Automatically start video recording when the DVR system is executed.

(4) Audio Setup

- **Audio Mute:** Enable/disable audio output at preview mode.

(5) Configuration

Backup a copy of all the settings and allows you to regain the same settings back. To save the current settings, click **Export**. To replace the settings with the one you have saved, click **Import**.

(6) Firmware

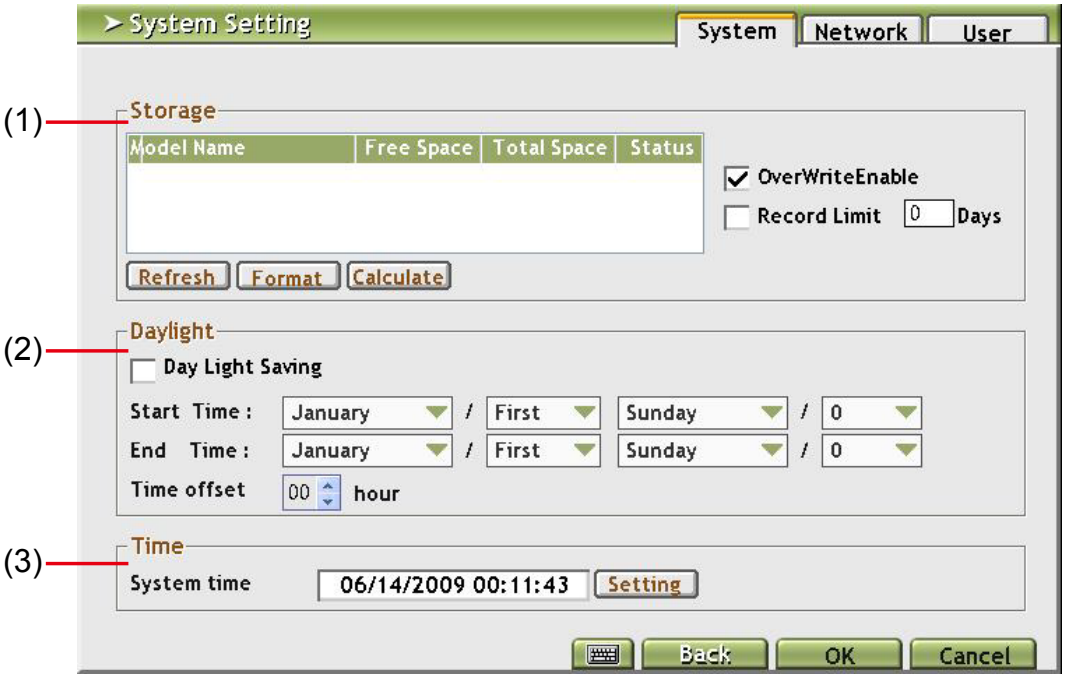
Display the current firmware version.

(7) Playback mode: Select the mode of playback the video.

- **Select date and time:** Select the date and time which user wants to playback.
- **Play the last file:** Automatically playback the video from the last hour
- **Instant Playback:** Automatically playback the video which has just recorded

Part II

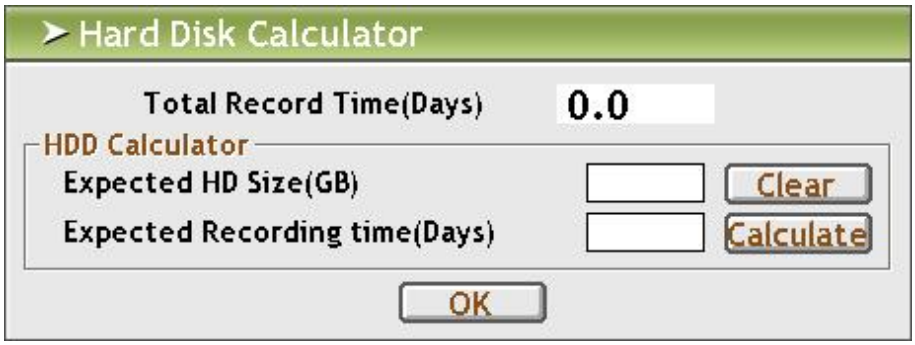
Click **Next** to go to next setup page, click **Back** can go back previous setup page. Click **OK** to accept the new settings, click **Cancel** to exit without saving.



(1) Storage

Display the recorded video save path. User can format the hard disk and calculate the approximately capacity of hard disk for recording.

- **Format:** To format the hard disk.
  1. Click **Refresh** to get the current storage path list.
  2. Select the storage path and click **Format** button.
- **Calculate:** To calculate the capacity of hard disk for recording, click **Calculate**. And then, fill in the hard disk capacity in **Expected HD Size (GB)** or enter the expected record days in **Expected Recording time (Days)**, and then, click **Calculate** to start calculation. To reset the entered value, click **Clear**. The result will be shown in **Total Record Time (Days)** column. To exit, click **OK**.



- **Overwrite Enable:** When there is not enough free space to record one hour data, the system automatically replaces the oldest data.
- **Record Limit Days:** If you want the system to automatically erase the data after a certain days, enable the **Record Limit** check box and enter the numbers of days in **Days** text box.

(2) Daylight

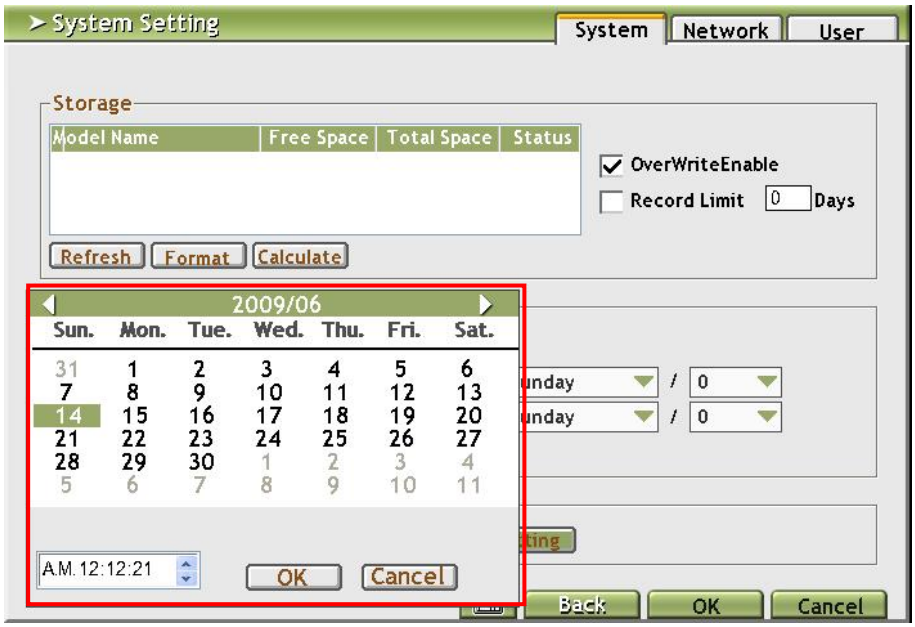
Mark **Day Light Saving** check box to enable daylight saving. And then, select the **Start** and **End Time** by click **Setting**.

- **Time Offset:** Assign a time that it is for daylight saving time offset in your time zone. For example:

if the time zone is in U.S. Eastern, the time offset is 1 hour.

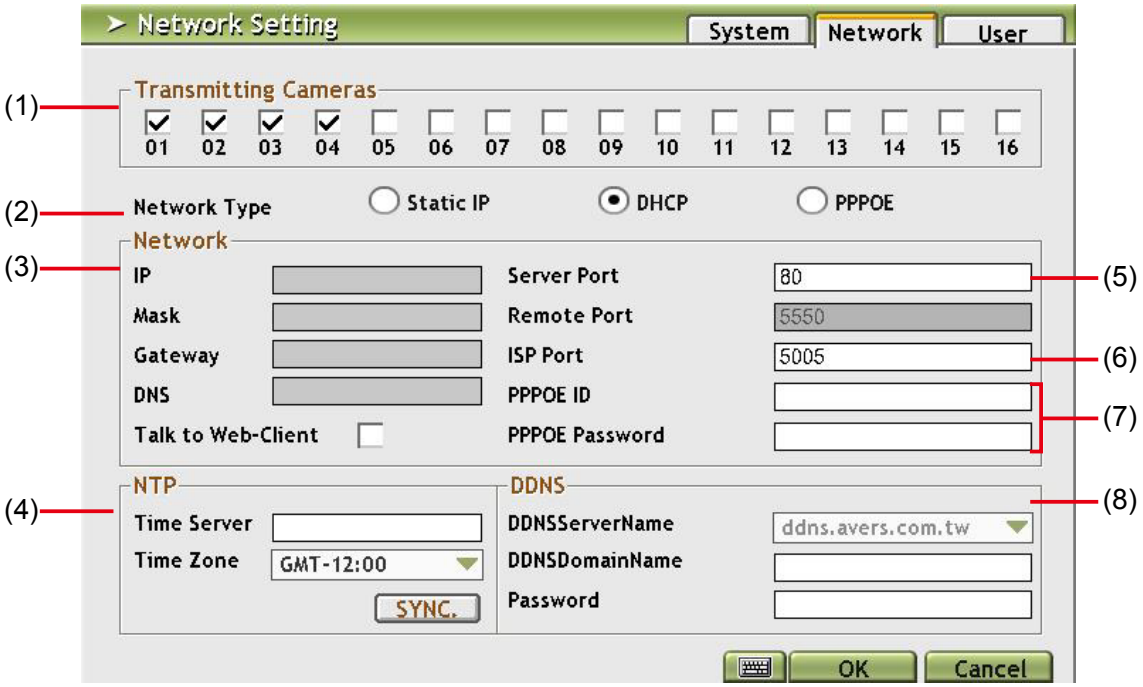
(3) Time

Adjust the DVR system time and date. Click **Setting** to select the month, date, hour, and minute. When it is done, click **OK** to save.



3.1.2 Network Setup

Setup system network parameters. Click **OK** to save the configuration, click **Cancel** to exit without save. Click to call out virtual keyboard for entering value in necessary columns.



(1) Transmitting Cameras

Mark the camera number check box that user wants to make it accessible via internet using WebViewer, Remote Console, PDA Viewer and HandyViewer (still image).

(2) Network Type

Select the type of network that user wants to use.

- **Static IP:** Assigns an fixed IP address for the DVR system.
- **DHCP:** Assign an IP address to DVR system by local DHCP server.
- **PPPOE:** Point-to-Point Protocol over Ethernet is a network protocol for encapsulating PPP frames in Ethernet frames. It is used mainly with ADSL services. If your network is using ADSL service connecting to internet, and then, select PPPOE mode.

(3) Network

When user selects **Static IP** as a network type, please fill in the following information to make network works.

- **IP:** Assign a constant IP address which a real IP address gives from ISP to DVR system.
- **Mask:** It is a bitmask used to identify the sub network and how many bits provide room for host addresses. Enter the subnet mask of the IP address which user has assigned to DVR system.
- **Gateway:** A network device acts as a passageway to internet. Enter the network gateway IP address.
- **DNS:** Domain Name Server translates domain names (such as www.abb.com.tw) to IP addresses. Enter the IP address of DNS if it is available.
- **Talk to Web-Client:** To use the 2-Way Talk feature that allows the client and server to talk via internet using microphone. Make sure both microphone and speakers work before using this feature.

(4) NTP

Adjust the DVR system time according to network time server. Fill in the IP address or domain name in **Time Server** column and select the **Time Zone**. And then, clicks **Sync** button to start adjust

system time from network server.

(5) Server Port

Fill in the port number that is using for WebViewer connection. Default is 80.

(6) Remote Port

The port for remote accessing (ex: remote console)

(7) ISP Port

Fill in the port number that is using for remote updating firmware. Default is 5005.

(8)PPPOE ID and **PPPOE Password**

Fill the **PPPOE ID** and **PPPOE Password** that provides from your ISP for PPPOE connection authentication.

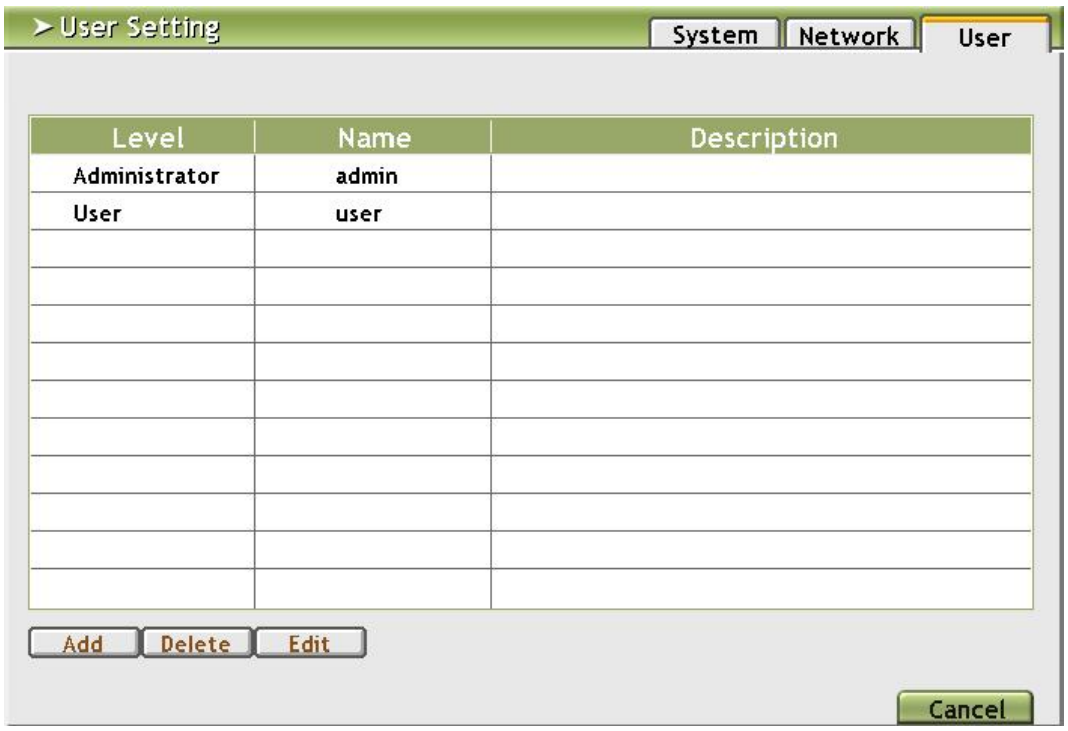
(9) DDNS

Dynamic Domain Name Service is a data query service mainly used on the Internet for translating domain names into Internet addresses. Users can register their own domain name on **http://ddns.avers.com.tw**. (See Appendix A)

- **DDNS Server Name:** Select your DDNS server. The default only has one DDNS server now. It may provide more DDNS in future.
- **DDNS Domain Name:** Enter the domain name that user has registered.
- **Password:** A password use to access DDNS that user has setup when register the domain name

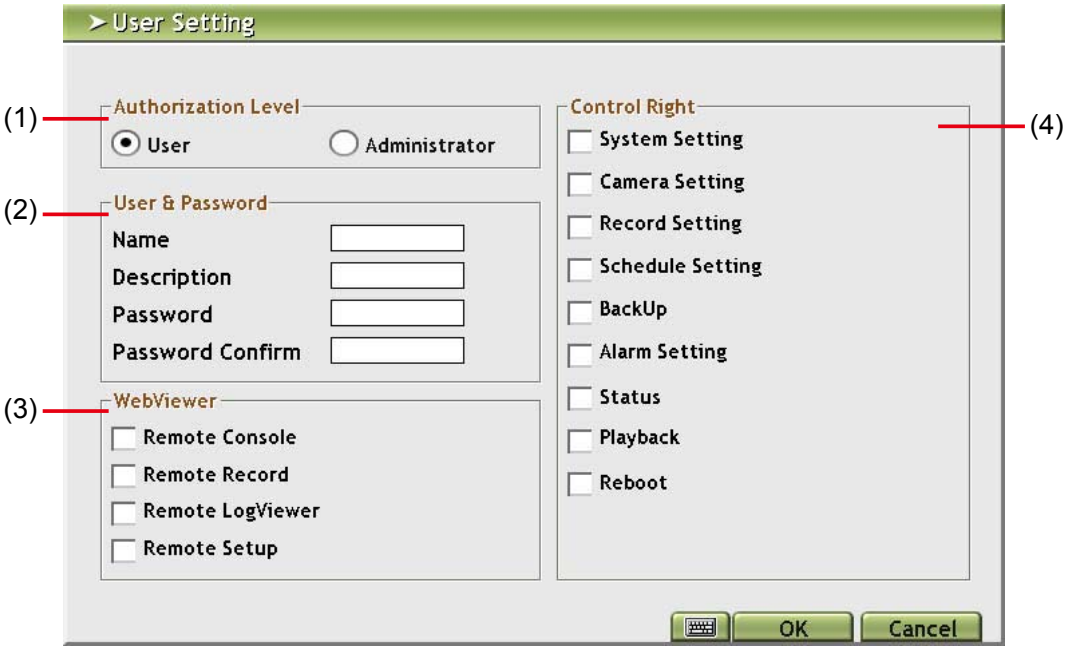
3.1.3 User Setup

User can create user accounts in different authority. Click **Add** to create a new user account. Click **Cancel** to exit without save. To modify the user account, select the account and click **Edit**. If user wants to remove the user account, select the account and click **Delete**.



To create a account:

Click **User** tab from System setting interface. User should see the following setup windows. Refer the following description to create a user account. Click or right-click on the column to call out virtual keyboard for entering value in necessary columns. Click **OK** to save and exit the setup windows, click **Cancel** to exit without save.



(1) Authorization Level

Select the account level that user wants to create – **User** or **Administrator**

(2) User & Password

- **Name:** Enter a name for the account.
- **Description:** Enter a short description for the account.
- **Password:** Assign a password for login authentication.
- **Password Confirm:** Re-enter the password again for confirmation.

(3) WebViewer

Select the control right of remote accessing. In default, the administrator account is all selected.

- **Remote Console:** Allow user to using remote access DVR system via Remote Console application.
- **Remote Record:** Allow user to operate recording from remote site.
- **Remote LogViewer:** Allow user to view event logs from remote site.
- **Remote Setup:** Allow user to configure DVR system from remote site.

(4) Control Right

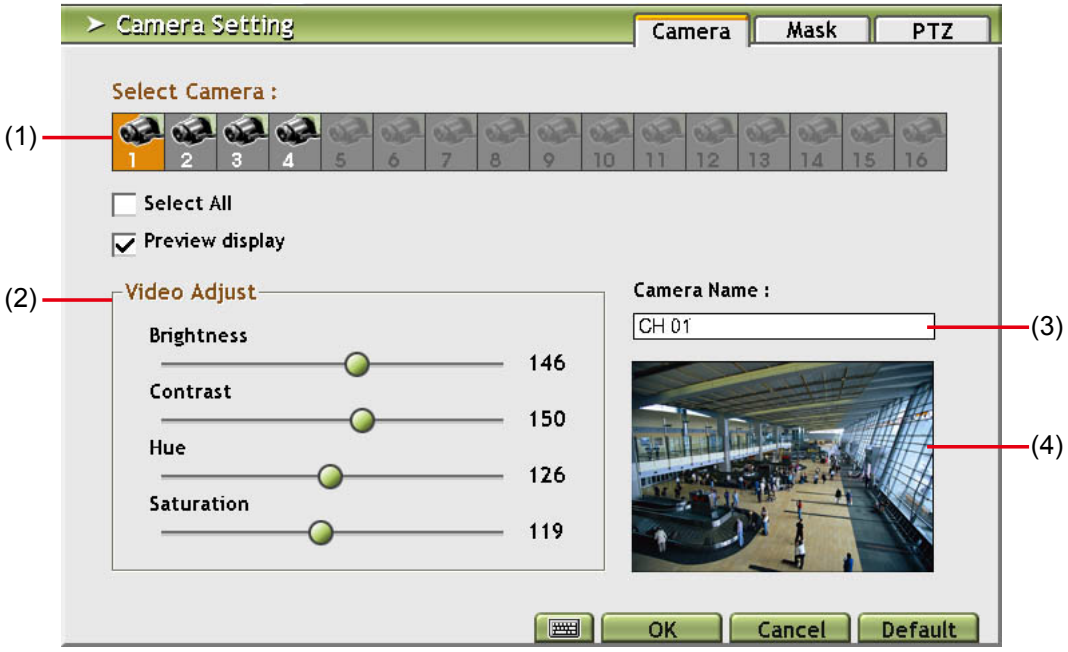
Select the control rights on the DVR system that allow user to execute selected operations on DVR system. In default, the administrator account is all selected.

3.2 Camera Setup

User can configure camera, motion mask, and PTZ camera parameters in this section.

3.2.1 Camera Setting

Click to call out virtual keyboard for entering value in necessary columns. Click **OK** to save and exit the setup windows, click **Cancel** to exit without save.



(1) Select Camera

Select the camera number you want to configure. To select all cameras, mark **Select All** check box.

- **Preview display:** Enable/disable the previewing of selected camera on surveillance screen. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(2) Video Adjust

Adjust the brightness, contrast, hue, and color of the camera.

(3) Camera Name

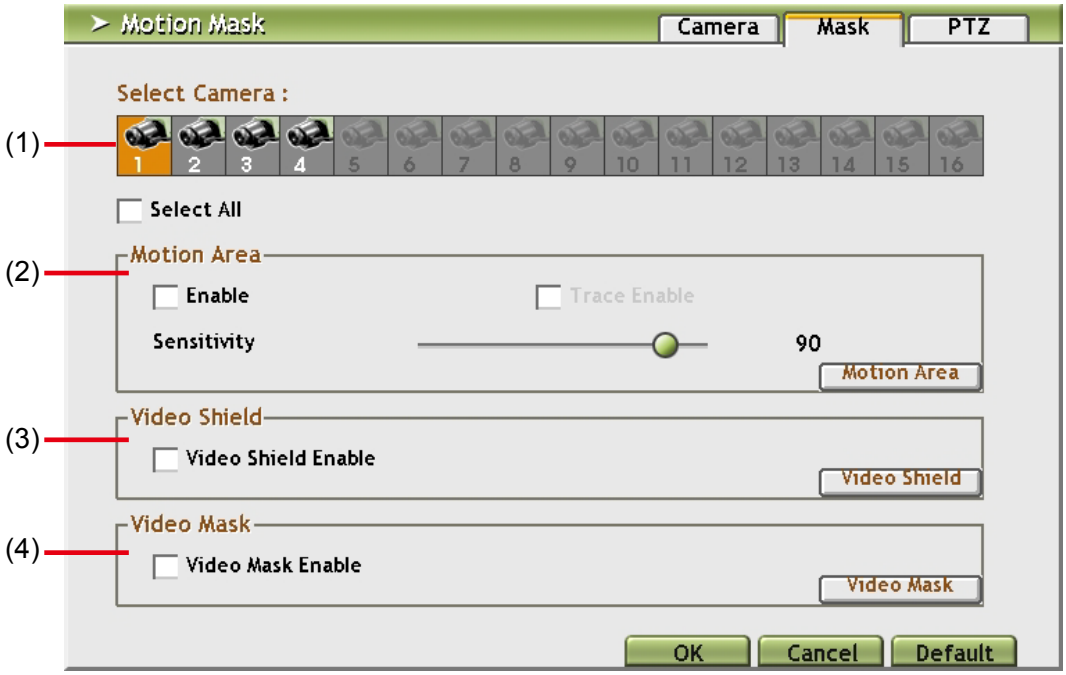
Enter the name of camera. Maximum is 10 characters.

(4) Preview screen

The selected camera video will be display in here.

3.2.2 Motion and Mask Setting

Click **Default** will back to the factory default value.



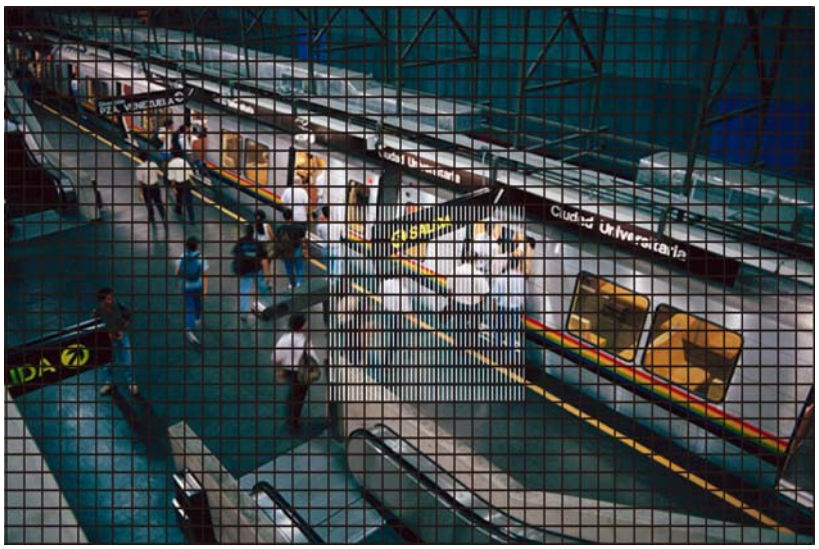
(1) Select Camera

Select the camera number you want to configure. To select all cameras, mark **Select All** check box.

(2) Motion Area

Enable/disable the motion detection and motion area setup.

- **Enable:** Enable/disable motion detection.
- **Trace Enable(*):** Enable/disable a motion trace triangle mark will appear on screen when motion is detected.
- **Sensitivity:** Set the sensitivity level of motion detector. The higher the value, the finer the sensitivity is detected.
- **Motion Area:** Mark an area on the screen to regard the motion detects in the marked area. Use the mouse drag from up to down to select a motion mask area. To un-select the mask area, click **Clear** button.

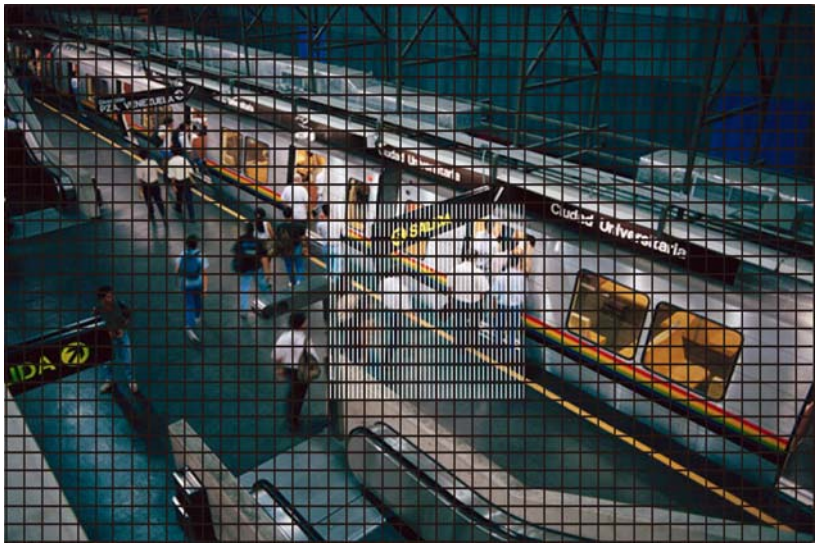


(3) Video Shield

Video shield covers an area on the screen and the covered area would not be visible on the screen

and recorded.

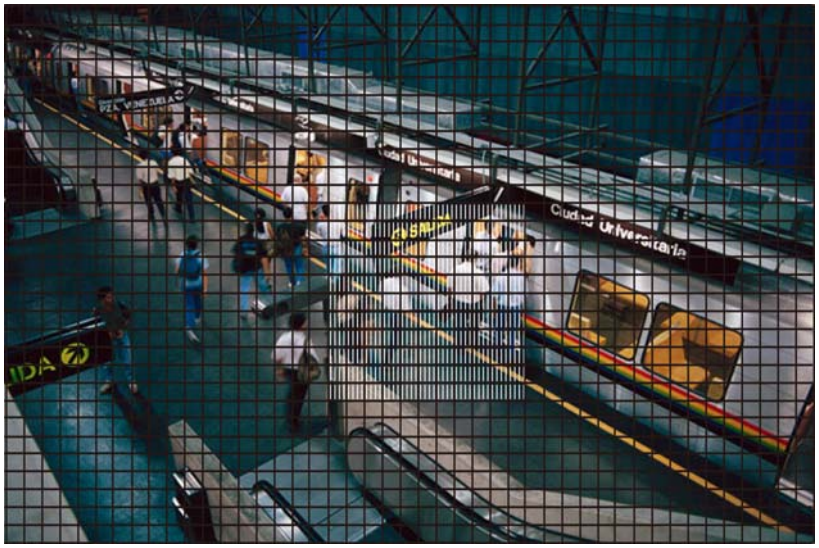
- **Video Shield Enable:** Enable/disable video shield function.
- **Video Shield:** To select an area for video shield. Use the mouse drag from up to down to select a video cover area. To un-select the mask area, click **Clear** button.



(4) Video Mask

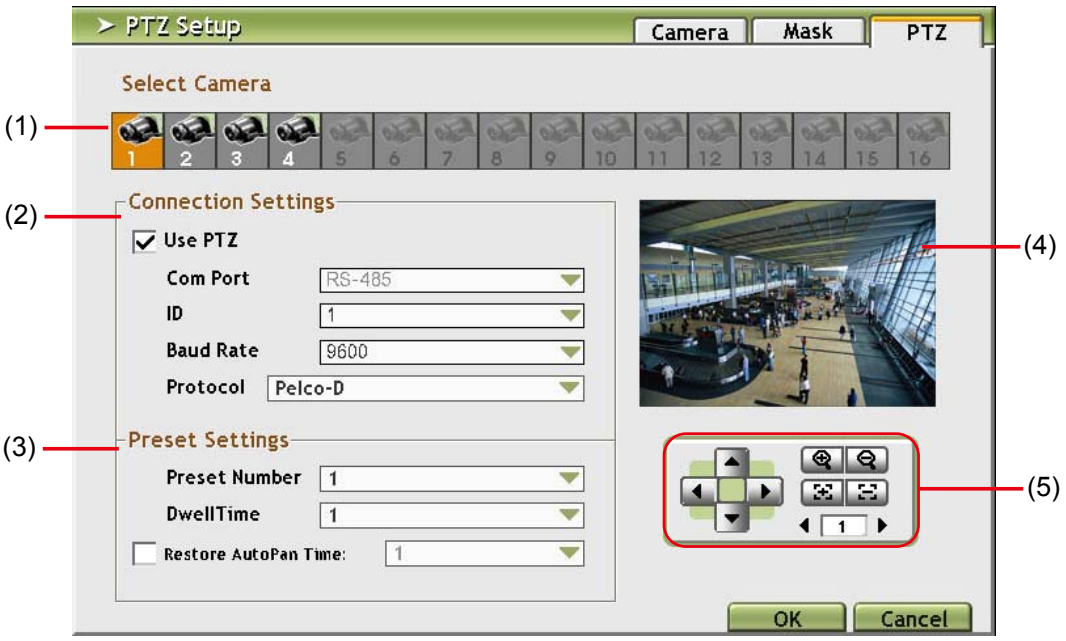
Mark an area on the screen to disregards the monitor in the marked area and to only monitor outside the marked area.

- **Video Mask Enable:** Enable/disable video shield function.
- **Video Mask:** To select an area for video mask. Use the mouse drag from up to down to select a video cover area. To un-select the mask area, click **Clear** button.



3.2.3 PTZ Camera Setting

Configure PTZ camera parameters and preset position. Click **OK** to save the setting, click **Cancel** to exit without save. When PTZ camera is set, user can control PTZ camera through PTZ control panel on preview and playback mode (see also Chapter 2.3.2).



(1) Select Camera

Select the camera number that is a PTZ camera to configure.

(2) Connection Setting

- **Use PTZ:** Enable/disable the PTZ camera function.
- **Com Port:** Select the com port that is connect with DVR system.
- **Baud Rate:** Select the baud rate of com port which is connect with DVR system.
- **Protocol:** Select the protocol of PTZ camera. Please refer to your PTZ camera user's manual.

(3) Preset Setting

- **Preset Number:** Set a camera lens to a position that user is defined. Select the **Preset** number and using **(5) PTZ control panel** to adjust the camera lens to the wanted position. Repeat to set reset of preset position.
- **Dwell Time:** Set a time for how long the PTZ camera stays in that position before it moves to the next one.
- **Restore AutoPan Time:** Set a time period for restoring auto path function after the PTZ camera has been moved. Mark the **Restore AutoPan Time** check box and select the time period in second.

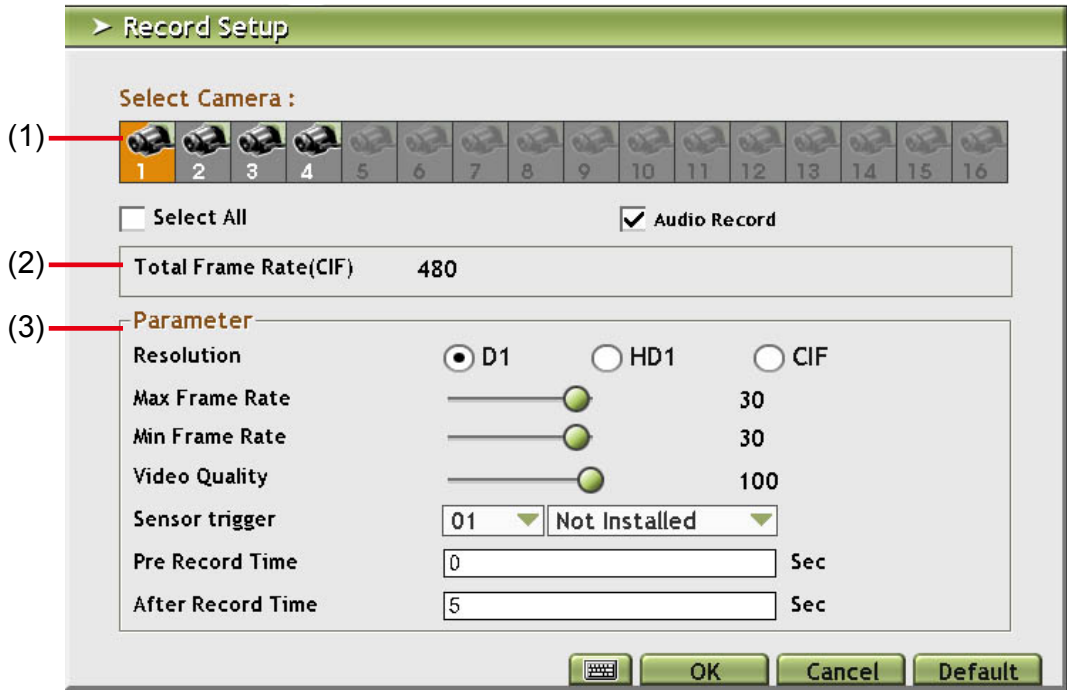
(4) Preview Screen

Display the video of selected PTZ camera.

(5) PTZ Control Panel

To control PTZ camera lens to move up, down, left, right, zoom in/out, focus in/out, and speed up/down when setup up preset position.

3.3 Recording Setup



(1) Camera Icons

Select the camera number you want to set the recording setting. To select all the cameras, mark the **Select All** check box. To select more than one camera, **Right click** on the camera icon. To select one camera only, **Left click** on the camera icon. The camera icon turns orange when it is selected.

- **Audio Record:** Enable/disable to record audio while recording.

(2) Total Frame Rate

Total Frame Rate value is depending on the video system that is using.

(3) Parameter

- **Resolution:** click the radio button (⦿) button to select the record mode – D1, CIF, or HD1. Under D1 mode, the video recording is in full screen resolution. Each channel is recorded only at a maximum frame rate. Whereas in CIF mode, video recording is at a lower resolution.
- **Max Frame Rate:** Set the maximum number of frames to be recorded in Smart recording mode. The higher the frame rate, it uses more hard disk space.
- **Min Frame Rate:** Set the minimum number of frames to be recorded during motion and motionless state. The higher the frame rate, it uses more hard disk space.
- **Video Quality:** Adjust the video quality. The higher the value, the lower the compression level and uses more hard disk space.
- **Sensor Trigger:** Customize the initial state of the attached sensor.

Condition	Description
NOT INSTALLED	Indicates that there is no sensor connected
NORMAL OPEN	Indicates that the initial state of the sensor is normal open. Video recording initiates when there is a changes in the sensor state
NORMAL CLOSE	Indicates that the initial state of the sensor is normal close. Video recording initiates when there is a changes in the sensor state

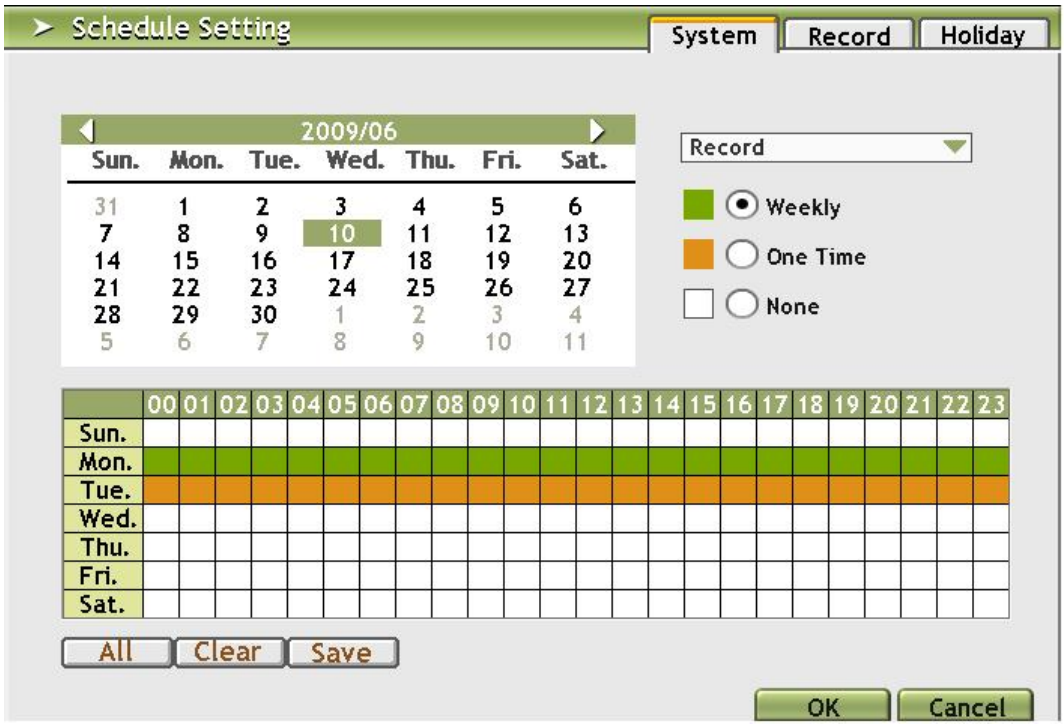
- **Pre Record Time:** set the time in second for the DVR system to pre-recording before the alarm happen.
- **After Record Time:** set the time in second for the DVR system to continue recording after the alarm has ended.

3.4 Schedule Setting

Setup system schedule, record schedule, and holiday schedule for DVR system.

3.4.1 Setup System Schedule

Schedule to record, disable network, reboot and disable alarm of all the cameras either weekly or one time. The number from 00 to 23 represent the time in 24-hour clock. The left most column display the days in a week. Green color represent weekly schedule, orange color is one time schedule, and white color is no schedule at all.



To Set the System Schedule:

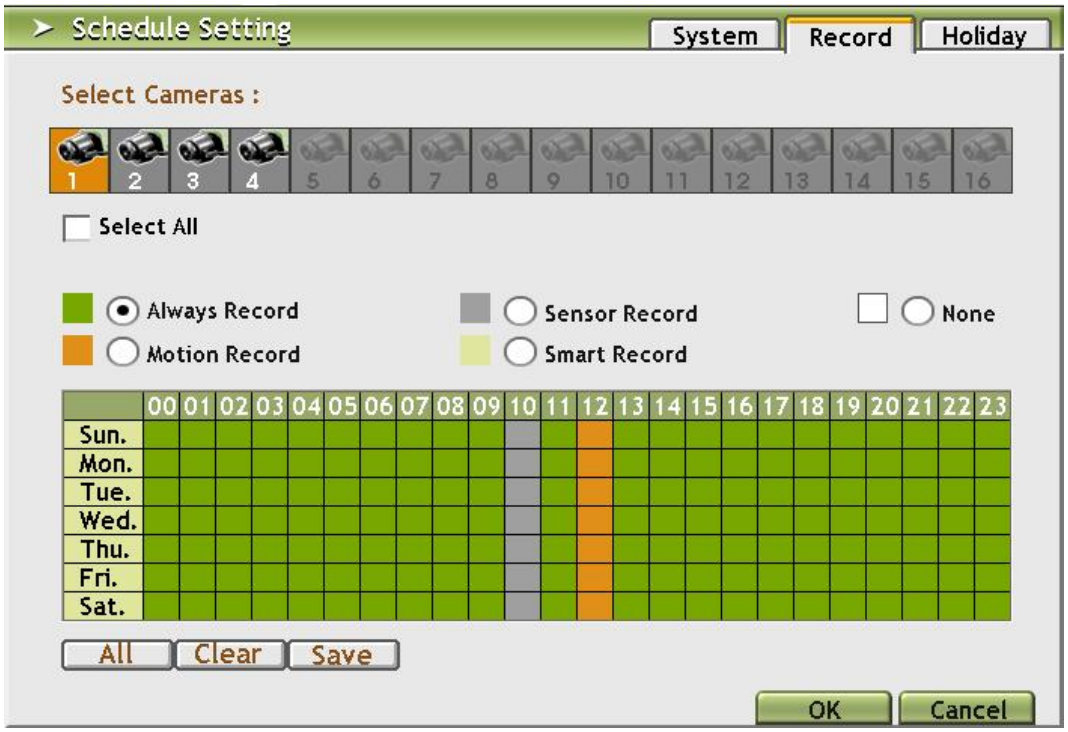
1. Click > **Schedule** > **System** tab.
2. Select the date in the calendar. Use arrow button to shift the calendar to the left or right.
3. Select the condition you want to schedule in the drop down list.
   - **Record**
     Activate all the cameras to start video recording at the set time based on the Recording schedule.
   - **Reboot**
     Restart the PC at the appointed time.
   - **Disable Network**
   - Allow remote system to access DVR system at the set time. After the appointed time, the Network function will be disabled. If the Network function is already enabled, the Network function will not be disabled when the appointed time has ended.
   - **Disable Alarm**
     Deactivate the alarm at the set time temporarily.
4. Set the schedule it as weekly or one time. Click ⊙ to make a selection.
   - **Weekly:** To record at selected date and hours in every week.
   - **One Time:** To record at selected date and hours only one time.
   - **None:** No any recording at all.
5. Click on the blocks to set the schedule or click **All** to select all. To un-select the specific schedule blocks, click the **None** and click blocks to un-select. Click **Clear** will un-select all schedule block.

6. To store the setting, click **Save**.
7. To end Schedule Setting, click **OK** to exit and accept the setting and **Cancel** to exit.

3.4.2 Setup Recording Schedule

To setup recording schedule based on date, time, and record modes.

Recording schedule must be set in order to record.



To Set the Recording Schedule:

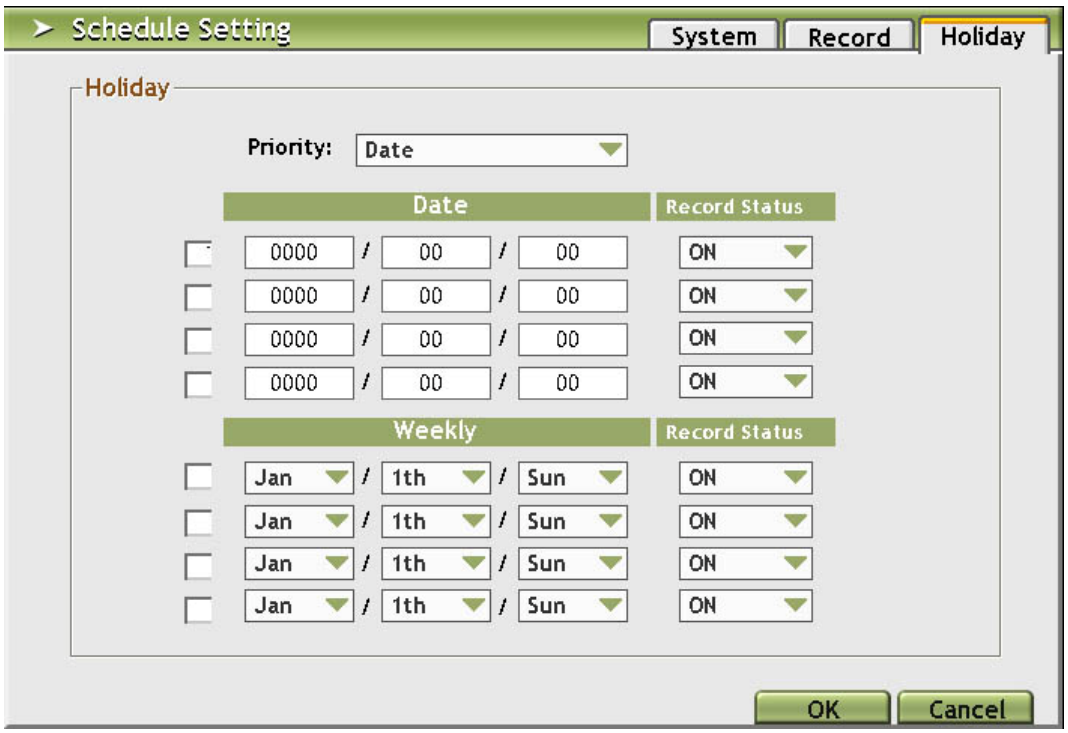
1. Click > **Schedule** > **Record** tab.
2. Select the camera or mark **Select All** to select all cameras.
3. Select the record mode. Click ⊙ to make a selection.
   - **Always Record**
     Record the video from the selected camera and save it to the designated storage path.
   - **Motion Record**
     Start recording the video from the selected camera only when the system detects movement. Once a motion is detected, the system automatically saves the previous frames and stop based on the **Pre Record Time** and **After Record Time** settings.
   - **Sensor Record**
     Start recording the video from the selected camera only when the sensor has been triggered. Once a sensor is triggered, the system automatically saves the previous frames and stop based on the **Pre Record Time** and **After Record Time** settings.
   - **Smart Record**
     Automatically switch to recorded at the maximum frame rate setting once a motion is detected and if there is no motion, it records at the minimum frame rate setting. Set the maximum frame rate setting in Chapter 3.3 Recording Setup.
   - **None**
     The system won't do any recording.
4. After select the record mode, click the specific schedule block or click **All** to select all. To un-select the specific schedule blocks, select **None** and click blocks to un-select. Click **Clear** will

un-select all schedule block.

5. To store the setting, click **Save**.
6. To end setting, click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.

3.4.3 Setup Holiday Schedule

To setup record status for the specific holiday.

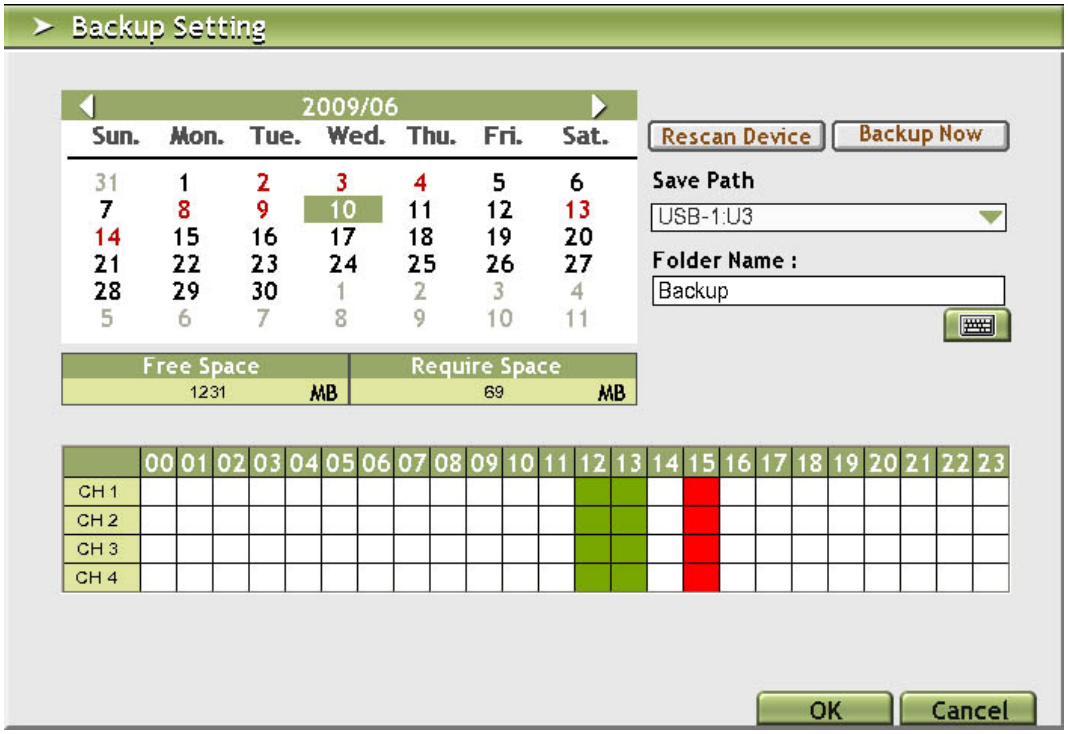


To Set the Recording Schedule:

1. Click > **Schedule** > **Holiday** tab.
2. Select the **Priority** of holiday schedule. If the schedule has a conflict, system will follow the priority that user has choice.
   - **Date:** the specific date that user has setup will be the first priority if the schedule has a conflict.
   - **Weekly:** the selected week time will be the first priority if the schedule has a conflict.
3. To set a specific date, mark the check box and click the year, month or date column to select the date and select the **Record Status** (ON/OFF). ON means the DVR system will record on the holiday that has been set. OFF means the DVR system will not record on the holiday that has been set.
4. To select a week for recording schedule, mark the check box and select the month, date, and week. And then, select the **Record Status** (ON/OFF). ON means the DVR system will record on the holiday that has been set. OFF means the DVR system will not record on the holiday that has been set.
5. To end setting, click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.

3.5 Backup Setup

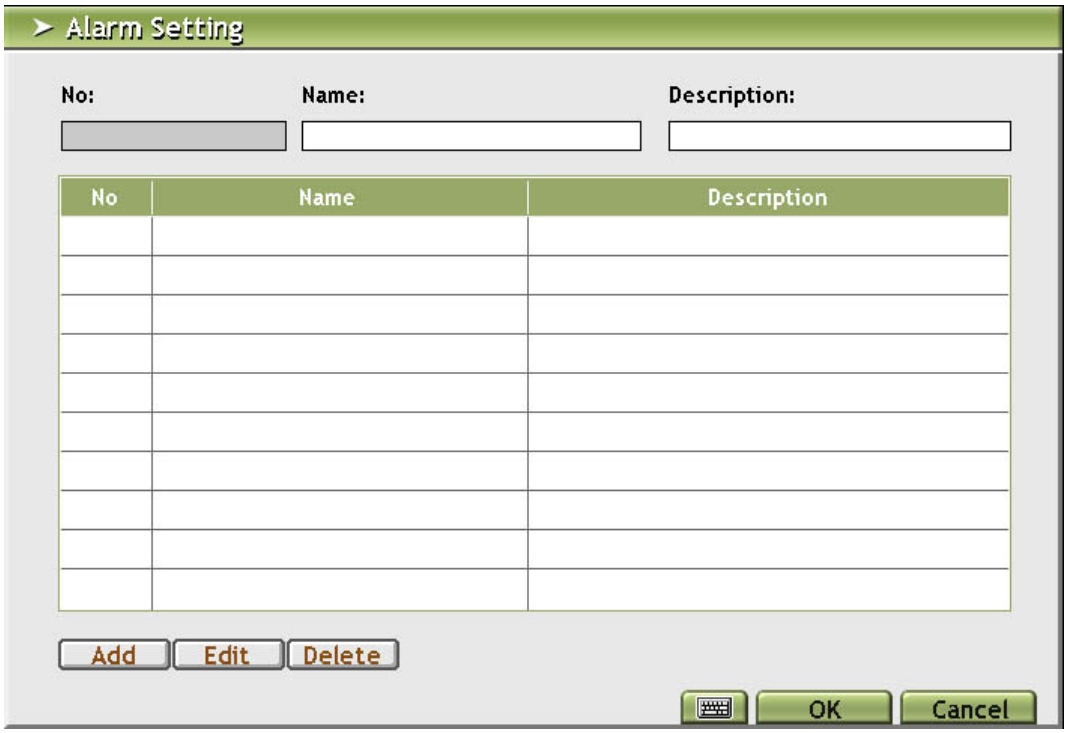
In the Backup Setting dialog box, the number from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera number. When you back up the file, you may find Qplayer application included in the backup folder. User need to install the Qplayer on PC to playback. (See also Chapter 3.5.1)



1. Click > **Backup**.
2. Select the date of the recorded file you want to backup in the calendar. Use arrow buttons to shift the calendar to the left or right.
3. In the table below, click on the green block to select the recorded file. The green block turns red when it is selected. The block that appears in white doesn't have data.
4. Select the **Save Path** – external USB storage device or DVD-ROM device. Click **Rescan Device** if system didn't detect any storage device.
5. Check the space needed for backup under the calendar. If the backup file is excess the free space, the **Require Space** will be in red text. Click **Rescan Device** to calculate the space for backup.
   - **Free Space**: the available storage space
   - **Require Space**: the total size of the backup file.
6. DVR system will give **Folder Name** automatically. If user wants to change, click to call out virtual keyboard to re-name the folder name.
7. Click **Backup Now** to start archiving the selected file.
8. When backup is 100% completed, click **OK** to end.

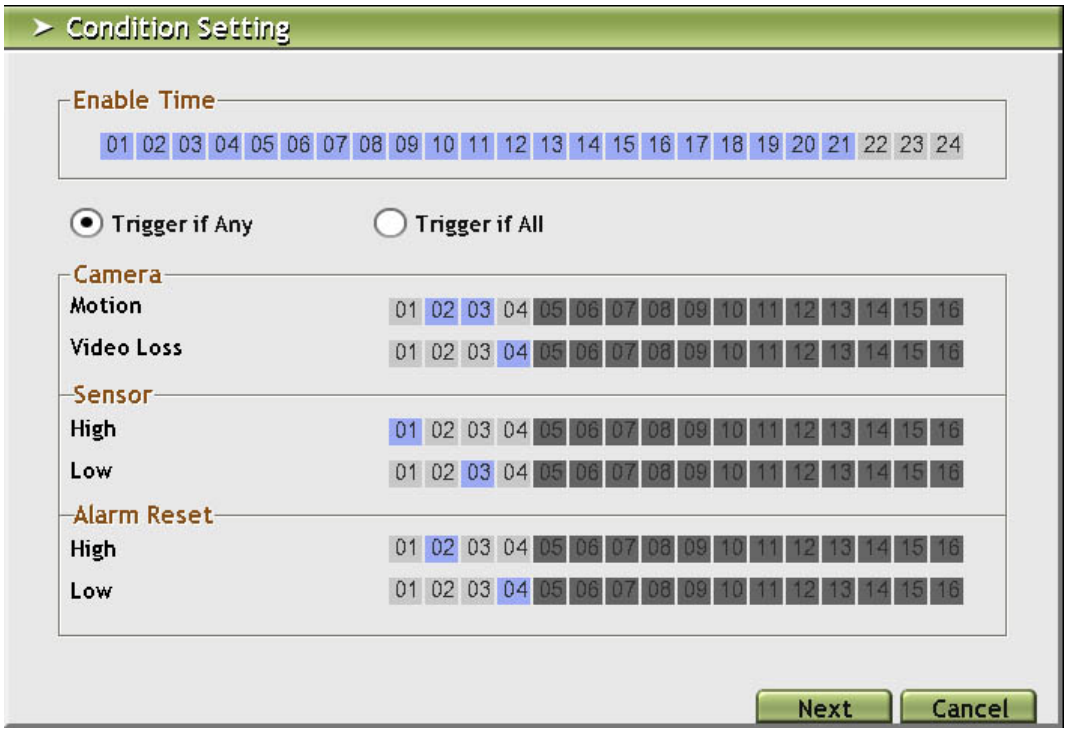
3.6 Alarm Setting

In the Alarm Setting windows, click **Add** to create and set new alarm setting, click **Delete** to remove the selected alarm setting, **Edit** to modify exist alarm setting, click **OK** to exit and save the setting, **Cancel** to exit without saving.



To set the Alarm Setting:

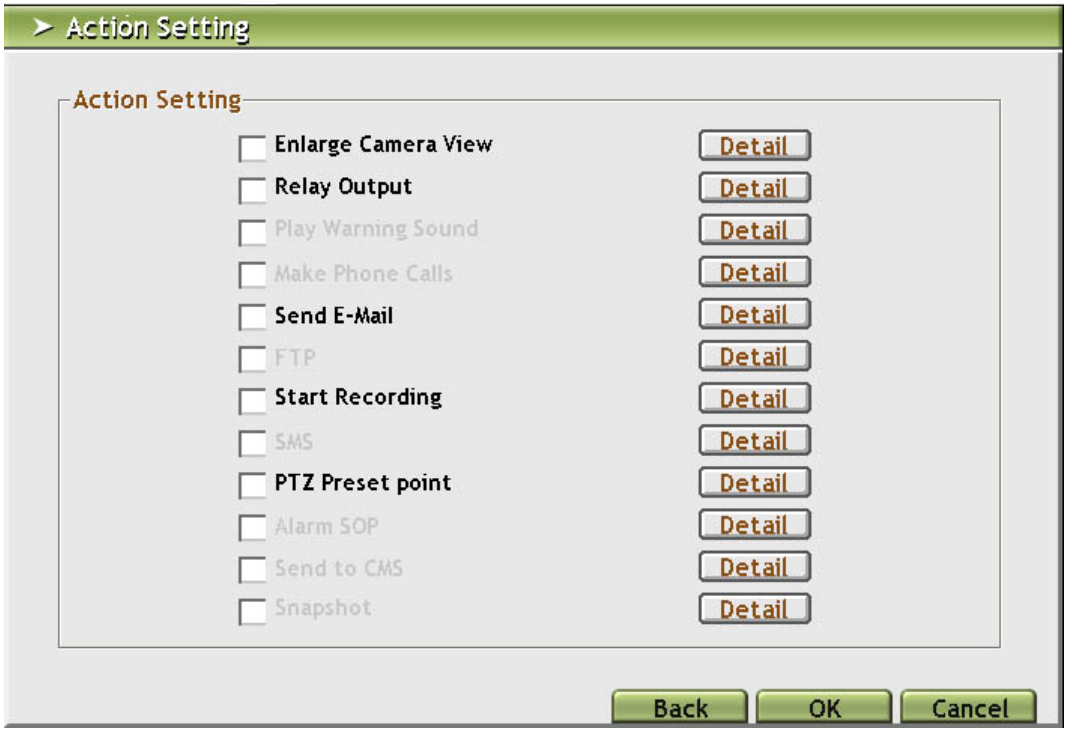
1. Click > **Alarm**.
2. Click **Add** to create new alarm setting.



3. In **Enable Time**, the number from 01 to 24 represent the time in 24-hour clock. Click the time that user want to activate or deactivate the alarm function.
4. Select **Trigger Any** to activate if it falls to one of the conditions or **Trigger All** to activate if it falls

to all conditions.

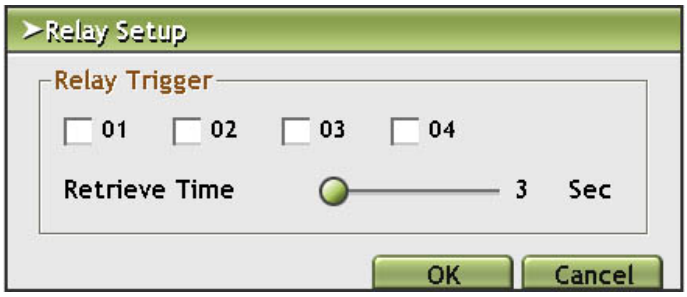
5. Set condition of **Camera**.
   - **Motion:** click on the camera number (01 to 04) to set the condition for the system to alarm.
   - In **Video Loss**, click the camera number (01 to 04) to set the alarm condition when video is lost.
6. Set condition of **Sensor**. Click on the sensor number to set the condition for the system to alarm. If the sensor normal status is high, set the sensor condition to low.
7. Set condition of **Alarm reset**. Click the camera number to set the reset condition of alarm. Once alarm is reset, all alarm action will stop at the moment.
8. Click **Next** to setup actions of alarm.



- **Enlarge Camera View**
  Switch to only display video in preview mode from where the alarm is activated.
  a. Select the camera from drop down list to specify which camera video to be enlarged on screen when the alarm is triggered.
     - ⊙ **Alarm Camera:** when a channel has an alarm occurred, and then, the channel video that has an alarm occurred will be enlarged on screen.
     - ⊙ **Camera # (1~4):** the selected channel video that will be enlarged on screen when an alarm is activated.
  b. **Retrieve time:** set the waiting duration before system switching back to original Preview mode. If the retrieve time is un-mark, the alarm video will keep enlarging until user switch back to Preview mode manually.

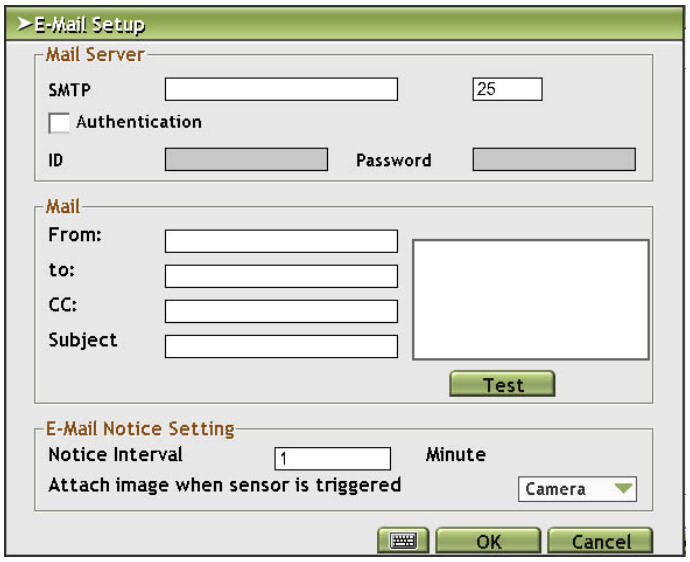
- **Relay Output**
  Set to enable/disable the relay operation when the alarm is activated and to extend additional

time in second before it stops the relay operation. In the Alarm Relay dialog box, mark from the available relay list; set to enable/disable the relay operation when the alarm is activated. Set the **Retrieve time**, you may to extend the relay operation time and set the duration in second. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.



- **Send E-mail**

  Send an electronic text message.



  - ✓ **Mail Server**

    Enter the **SMTP** Server and port. If your e-mail system requires user identification, enable **Authentication** check box and enter **ID** and **Password**.
  - ✓ **Mail**

    To check if it is working, click **Test** button.

    From: Enter the sender e-mail address.

    To and CC: Enter the recipient email address and separate it with comma or a semicolon (;).

    Subject: Enter the message title.

    Message: Type the message. Maximum is 4 lines.
  - ✓ **Email Notice Setting**

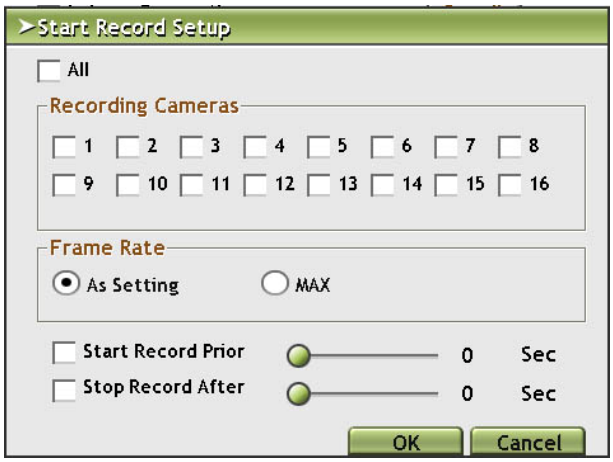
    Notice Interval: Set the period of time before it sends another e-mail notice.

- **Start Recording**

  Record the video from the selected camera.

  1. Select the camera to enable/disable video recording. Enable **All** to select all cameras.
  2. In the Frame Rate selection, select **As Setting** to record the number of frames based on the Recording Setting or **Max** to record the maximum of frames based on the available speed.
  3. In the **Start Recording prior** text box, mark and set the number in second for the DVR system to pre-recording before the alarm happen.

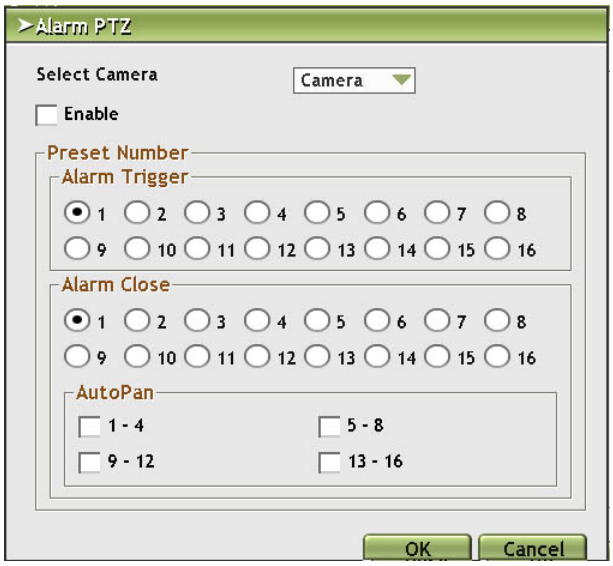
4. In the **Stop Recording after** text box, mark and set the number in second for the DVR system to continue recording after the alarm has ended. If user doesn't mark and set the time, the alarm recording will continue recording until alarm is reset.



- **PTZ Preset Point**

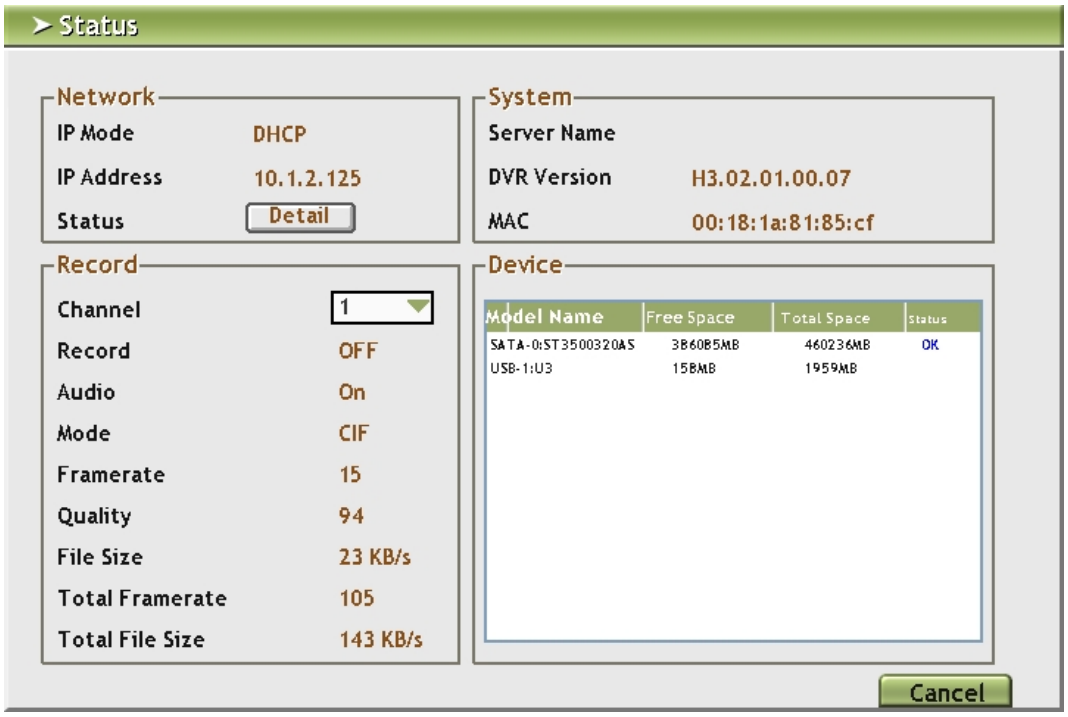
  Position the PTZ camera based on the preset point setting.

  Beside the PTZ preset point check box, click **Detail**. In the Trigger PTZ Preset Setting dialog box, select the PTZ camera number then select the Enable check box. Select the position of the PTZ camera when the alarm is activated and ended. For the PTZ camera ended point, user also can select one preset position or **Auto Path** between preset position groups.



3.7 Viewing System Status

To view the status of DVR system and channels.



Chapter 4 Using the USB Playback Console

4.1 Recommended system requirements

- ☐ Pentium®4 2.4GHZ or above
- ☐ Windows®2000/ XP/Vista
- ☐ DDR 256 MB
- ☐ Graphic function must support DirectDraw
- ☐ Audio card or built-in
- ☐ Speaker
- ☐ 1 available USB2.0 port

4.2 Installing the USB Playback Console

To install the USB Playback Console:

1. Place Installation CD into the CD-ROM drive. When the installation main screen appears, click **Install USB Playback Console** and then follow the on screen instructions

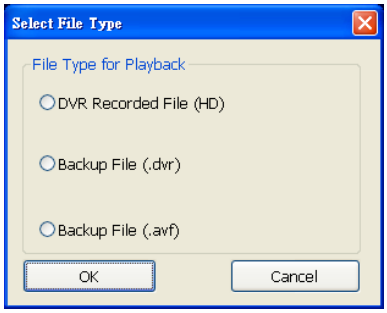
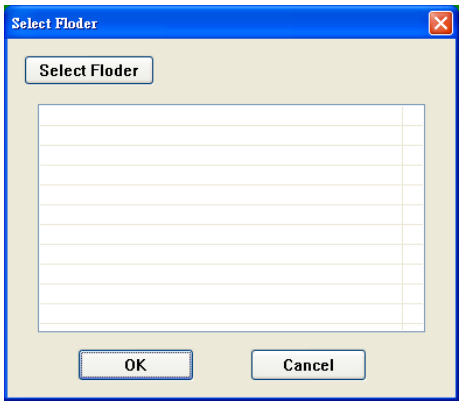
2. Select the language you prefer

3. Click **OK** to install the application
4. Click **Exit** to close the installation main screen.
5. You may now connect the external USB storage device that has saved recorded files to PC.

4.3 Running the USB Playback Console

To run the application, click the icon on the PC desktop

Name	Function
(1) Split Screen Mode	Select from different screen view to playback the recorded video file of the entire camera or one camera on screen.
(2) Exit	Close the application.
(3) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(4) Hour button	Select and click to playback the recorded video file on the specific time frame.
(5) Playback Controller	**Begin:** Move at the beginning of the recorded video file. **Previous:** Go back to the previous frame by frame. **Slower:** Play the recorded video file at the speed of 2x, 4x, 8x, 16x, or 32x. **Rewind:** Wind back the recorded video file. **Pause:** Briefly stop playing the recorded video file. **Play:** Play the recorded video file. **Faster:** Play the recorded video file at the speed of 1/2x, 1/4x, 1/8x, 1/16x, or 1/32x. **Next:** Go to the next frame by frame. **End:** Go to the end of the recorded video file.

Name	Function
(6) Archive	To select the video file source for playing.  – **DVR Recorded File (HD):** To playback the recorded video from the hard disk which was recording video on the DVR system. (see also Chapter 4.3.2) – **Backup File(.dvr):** The file is backup and save in *.dvr file format. (see also Chapter 4.3.3) – **Backup File (.avf):** The file is backup and save to external USB storage device in *.avf format. Select the file source folder and click **OK** to playback. 
(7) Status bar	Display the recorded date, time and play speed.
(8) Language	To switch DVR application UI language.
(9) Adv. Function	Advanced function is including : ■ **HDD Backup:** to call out HDD Backup application. (see also Chapter 4.3.4) ■ **iEnhance:** to call out iEnhance application. (see also Chapter 6) ■ **AVF to AVI:** save *.avf file format as *.avi file format.
(10) Export	Export includes Snapshot, Print, and Output Video Clip function. ■ **Snapshot:** Capture and save the screen shot either in *.jpg or *.bmp format. ■ **Print:** Print the screen shot. ■ **Output:** Save the segmented file in *.avi format
(11) Segment	Keep a portion of the recorded video (see also Chapter 4.3.1)
(12) Full screen	Use the entire area of the screen to only display the video. To return, press the right button of the mouse or **ESC** on the keyboard. When you switch to full screen in multiple-screen mode, Left click to toggle to only display one of the video in the multiple-screen mode or all.
(13) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(14) Visual Search	Search from a specific camera by Date, Hour, Minute, 10 Seconds and Second(see also Chapter 4.3.5)
(15) Find Next	Search for the next event or changes in the motion detector frame. You can use this when you are using Intelligent Search or Event Search function.
(16) Event Search	Search from the recorded activities that take place in the system (i.e., Sensor, Motion, Video Loss, POS)(see also Chapter 4.3.6)

Name	Function
(17) Intelligent Search	Search the changes in the motion detector frame (See also Chapter 4.3.7)
(18) Sound /Sound bar	Turn on and off the sound Increase and decrease the volume
(19) De-interlace	To enhance the video quality. Set the de-interlace mode to #1, if you are capturing motionless picture and #2, if it captures lots of movement.
(20) Watermark	- When playback ***.dvr** file, click watermark button to verify the correction of playback video. - When playback file from **hard disk** and ***.avf** file, click watermark to call out ImageVerification application. (see also Chapter 5)

4.3.1 To Cut and Save the Portion of the Recorded Video

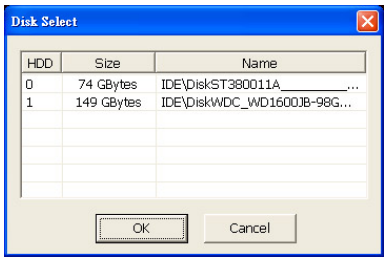
1. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to start the cut. Then, click **Segment** to set the begin mark.

2. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to end the cut. Then, click **Segment** to set the end mark. To cancel segmentation, click **Segment** button again.

3. Click **Output** button to save the wanted portion.
4. In the **Save As** dialog box, locate on where user wants to save the file, type the filename, and select the video format.

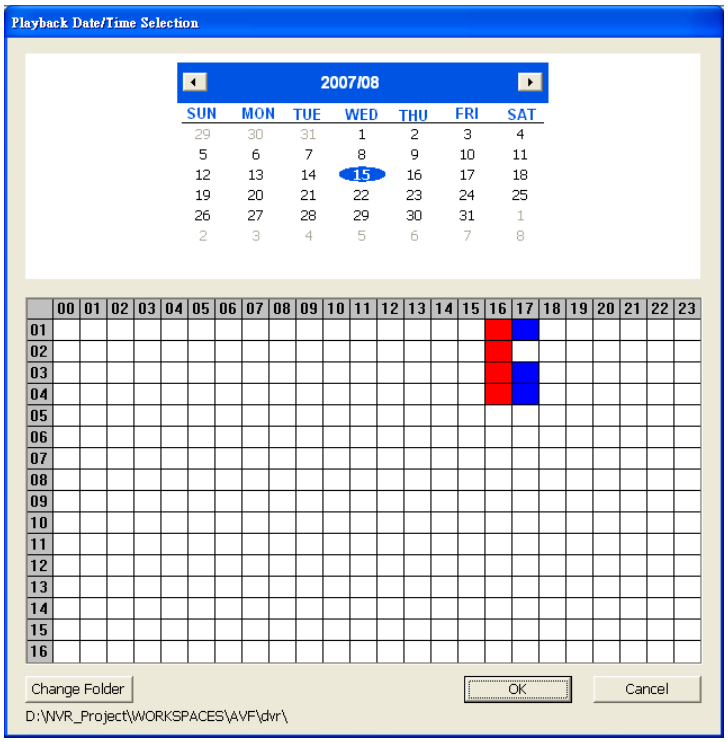
4.3.2 Playback DVR Recorded File from Hard Disk

1. Please have the hard disk which containing of recorded video data install on your PC or using external USB enclosure to connect to your PC.
2. Click **Archive** button
3. Select **DVR Recorded File(HD)** and click **OK**.
4. Select the hard disk drive from **Select Disk** window and click **OK**.



5. And then, Playback Date/Time Selection window appears. Select the date and time and click **OK**.

00~23 is hours and 01~16 is channel

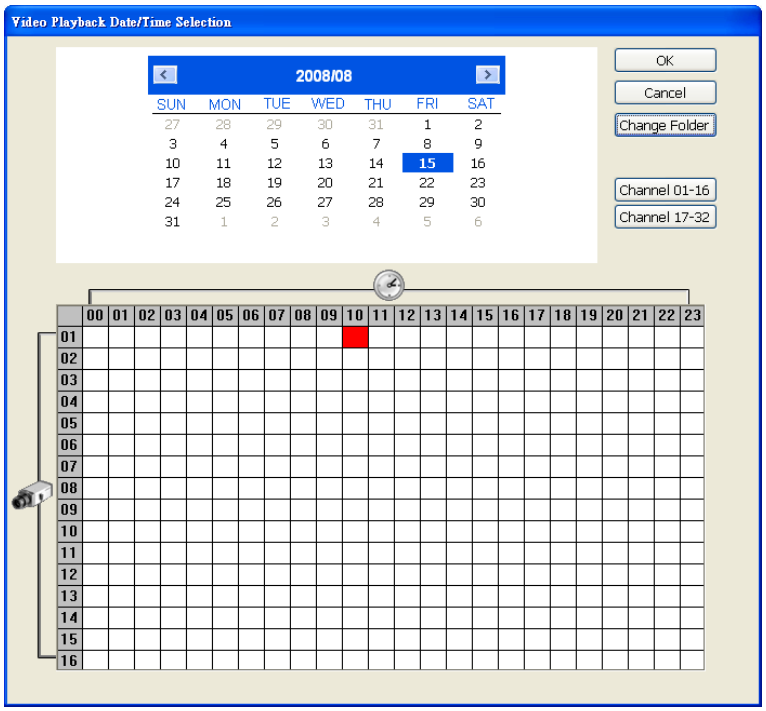


4.3.3 Playback Backup File(*.dvr)

1. Click **Archive** button.
2. Select **Backup File(*.dvr)** and click **OK**.
3. Locate the backup file folder and click **OK**.

When open the backup video file, just locate the where backup file folder is.

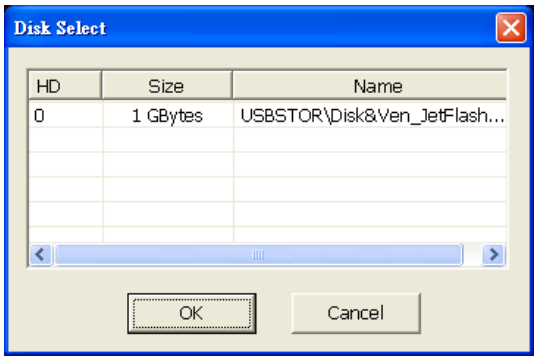
4. Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file.
   - **Change Folder:** To select different playback file form other folder location.
   - **Channel 01~ 16&Channel 17 ~ 32:** Switch to different channel group of playback calendar if the camera channel is more than 16 channels.



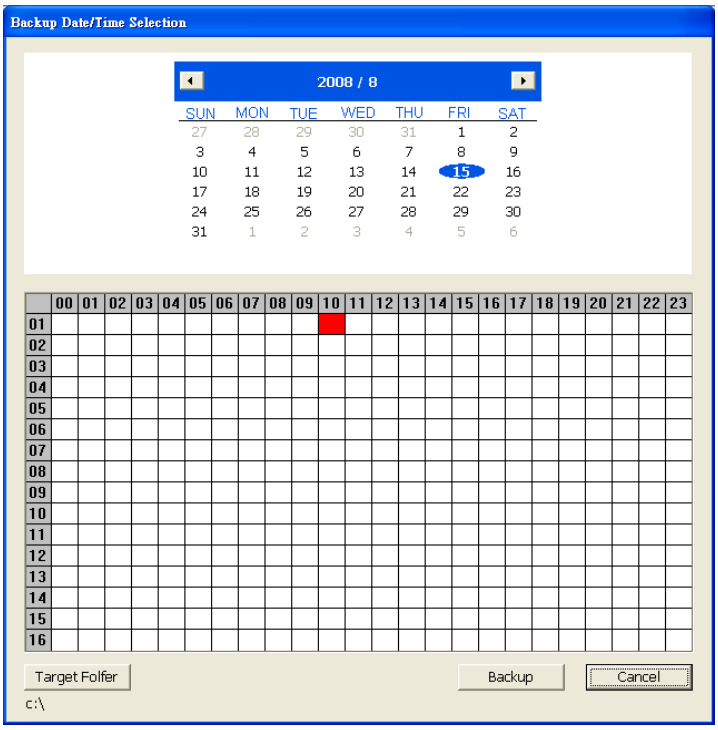
4.3.4 To Backup Recorded File

HDD backup function allows user to backup recorded file from hard disk.

1. Click **Adv. Function** → **HDD Backup** on USB Playback Console UI.
2. Select the source hard disk.



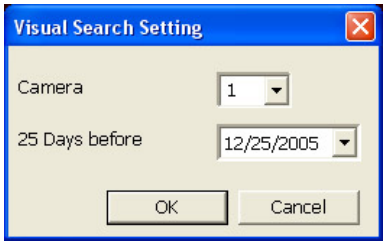
3. In Backup date/time selection windows, select the date and time. 00-24 represents hours and 01-16 represents channels. Blue block means there has recorded file. Red block means the block has been selected. User can click-and-drag the select multiple block at once.



4. Click **Backup** to start backup file.
5. When backup complete, the complete information windows will display.

4.3.5 To Search Using the Visual Search

1. Click **Visual Search**.
2. In the Visual Search Setting dialog box, select the Camera number and the date. Then click **OK**.



3. When a series of frames appear by date, click on the frame to display another series of frames and search by every Hour of that date, every 3Minutes of that hour, every 10 Seconds of that minute, every Second of that 10 seconds. To go back, click. To view from the selected frame and close event search, click.

4.3.6 To Search Using the Event Search

1. Click on the video screen on where you want to search.
2. Click **Event Search**. The Event Search text (red) would appear at the lower left corner of the screen.
3. In the Event Search Setting dialog box, check the type of condition you want to search. If you select POS, in the Find Text box, type the word. Then, click **OK** to start searching. The video search would stop at the frame that matches the condition. To keep on searching click .
4. You may also set to search and list all the result. Just check the **Output Event List** box. In the Search Duration section, set the **Begin Time** and **End Time**. Set **Searching Interval** for a time period won't list the same events. Then, click **OK** to start searching.
5. When the Event list appear, click and select the item you want to view.

4.3.7 To Search Using the Intelligent Search

1. Click on the video screen on where you want to search.
2. Click **Intelligent Search**. The Intelligent Search text (red) would appear at the lower left corner of the screen.
3. When the Intelligent Search Setting dialog box and motion detector frame appear, you may adjust the sensitivity bar and the motion detector frame size and location. To set motion detector frame size and location, left click and drag on the screen. Then, click **OK** to start searching. The video search would stop at the frame that matches the condition. To keep on searching click

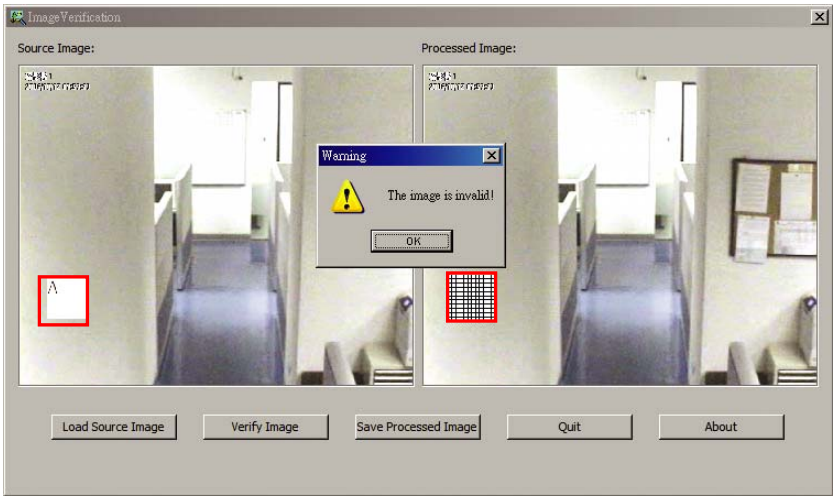
.
4. You may also set to search and list all the result. Just check the **List** box. In the Search Duration section, set the **Begin Time** and **End Time**. Set **Searching Interval** for a time period won't list the same events. Then, click **OK** to start searching

Chapter 5 ImageVerification

Image Verification is a watermark-checking program to identify the authenticity of a saved image (e.g. by snapshot). This program can only verify uncompressed bmp image files.

5.1 To Run the ImageVerification

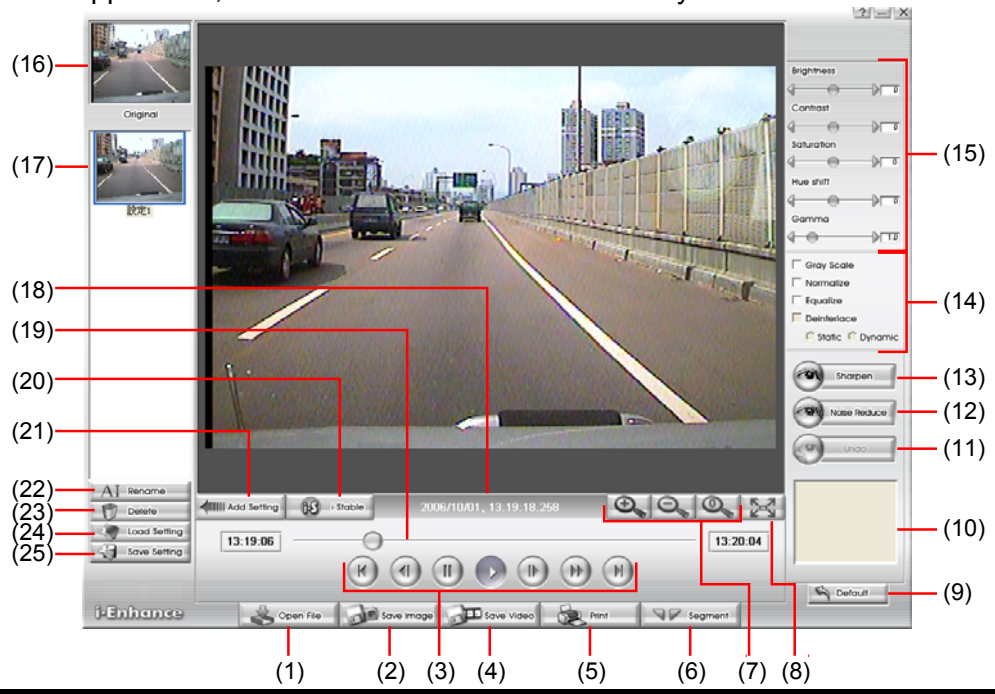
1. To run the ImageVerification application, click the **Watermark** button on USB Playback Application main interface.
2. In the ImageVerification screen, click **Load Source Image** and locate the image source.
3. Click **Verify Image** to begin the process.
4. Check the result in the **Processed Image** screen. If the picture is unmodified, the image in the **Source Image** and **Processed Image** screen would be exactly the same. If the picture is being modified, a warning dialog box would prompt and the modified area is highlighted.



Chapter 6 iEnhance

The bundled iEnhance is a video editing tool and can only be used with *.dvr video file. It allows you to adjust the video picture quality, segment and save the selected portion of the video, zoom in and out the image, and print or save the screen shot. You can also save the setting and apply it on other files.

To run iEnhance application, click **iEnhance** button on USB Playback Console interface.



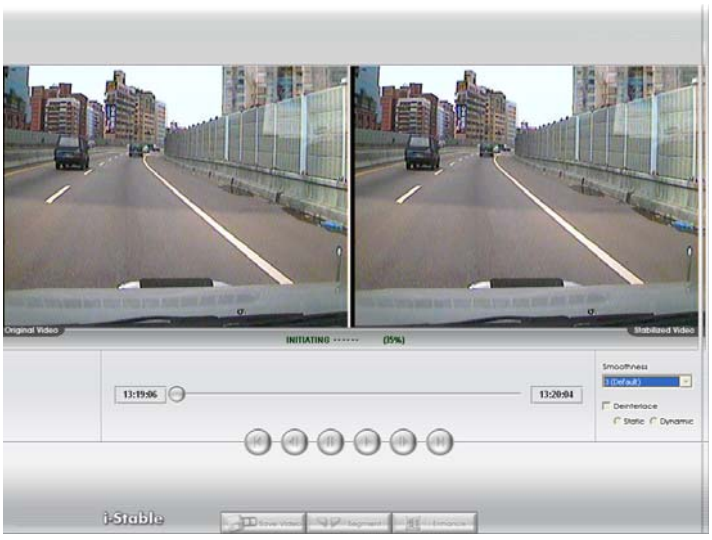
Name	Function
(1) Open File	Access *.dvr and *.avf video file.
(2) Save Image	Capture and save the screen shot in *.bmp format.
(3) Playback Control Buttons	**Begin:** Move at the beginning of the video file. **Previous:** Go back to previous frame. **Pause:** Briefly stop playing the video file. **Play:** Play the video file. **Next:** Go to the next frame. **Faster:** Play the video file at the faster speed. **End:** Go to the end of the video file.
(4) Save Video	Save the edited or segmented video in *.avi format.
(5) Print	Print the screen shot.
(6) Segment	Mark the beginning and the end of the selected portion of the video. Two triangle marks will appear on the slider. To cancel video segmentation, click this button again.
(7) Zoom Buttons	Enlarge, reduce, and set the image back to normal size.
(8) Full Screen	Use the entire screen to only display the video.
(9) Default	Set the video back to original state and delete all the changes in the history box.

Name	Function
(10) History Box	List all the actions.
(11) Undo	Delete the last action.
(12) Noise Reduce	Adjust the softness and repair the damaged colours.
(13) Sharpness	Improve the overall image by enhancing edges. This gives the image more depth.
(14) Effects	Gray Scale: convert the image into black and white (monochrome). Normalize: adjust the brightness intensity. Equalize: automatically adjust the images that are too dark. De-interlace: smooth out the overlying frames. Static: de-interlace for motionless scene. Dynamic: de-interlace for moving scene.
(15) Picture Adjustment	Adjust the Brightness, Contrast, Saturation, Hue and Gamma.
(16) Original Screen	Display the original state of the image.
(17) Temporary Setting Block	Display the sample settings. Click the sample to apply the setting on the current video.
(18) Status Bar	Display the date, and time of the video.
(19) Progress Bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(20) iStable	To reduce the jolt in the recorded video.(also see Chapter 6.1)
(21) Add Setting	Include the new setting to the temporary setting block.
(22) Rename	Change the name of the selected setting in the temporary setting block.
(23) Delete	Permanently remove the selected setting in the temporary setting block.
(24) Load Setting	Call the saved settings.
(25) Save Setting	Store the settings in the temporary setting block.

6.1 To Use iStable

The iStable function can reduce the jolt in the recorded video.

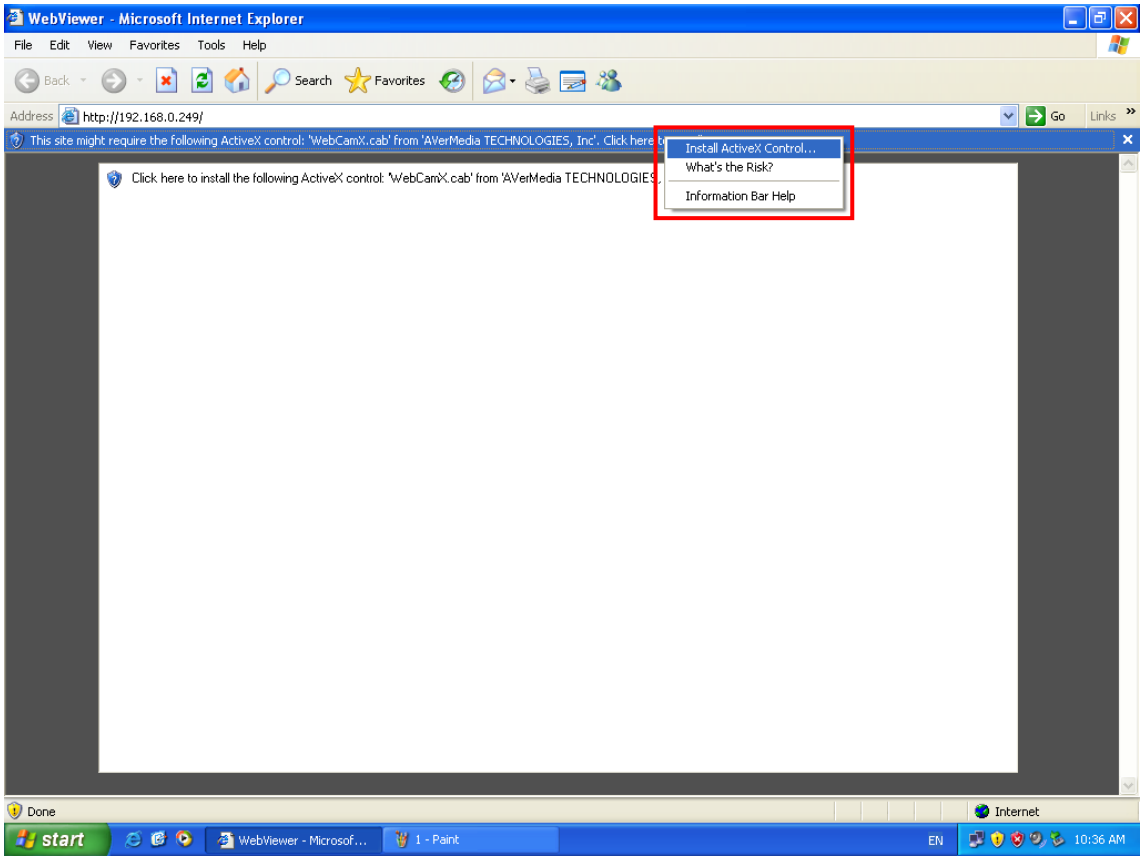
1. Click **Open File** button and select the recorded video.
2. And then, click **iStable** button.
3. iStable windows will show up.
4. Select the **smoothness** level – 1(Low), 2, 3, 4, and 5(High). The default value is 3.
5. Click Play button, and then iStable function will start to initial the recorded video.
6. When the initialize is done, user will see the original and stabilized recorded video play in two windows. The original video on the right side of window and the stabilized video on the left side of window.



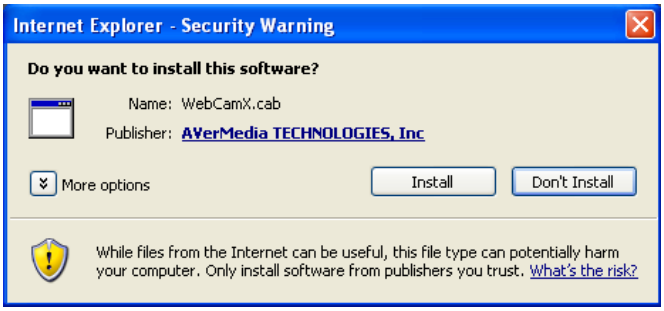
Chapter 7 Using the Remote Programs

User can use Microsoft Internet Explorer to access DVR system by entering the IP address. To use this feature, make sure that your PC and DVR server both are connected to the internet and the Network feature is enabled.

Accessing this feature for the first time you will be prompted by your browser to install WebCamX.cab, allow the installation and you should be able to connect and login afterwards.
Click to install ActiveX if your PC required to be installed.

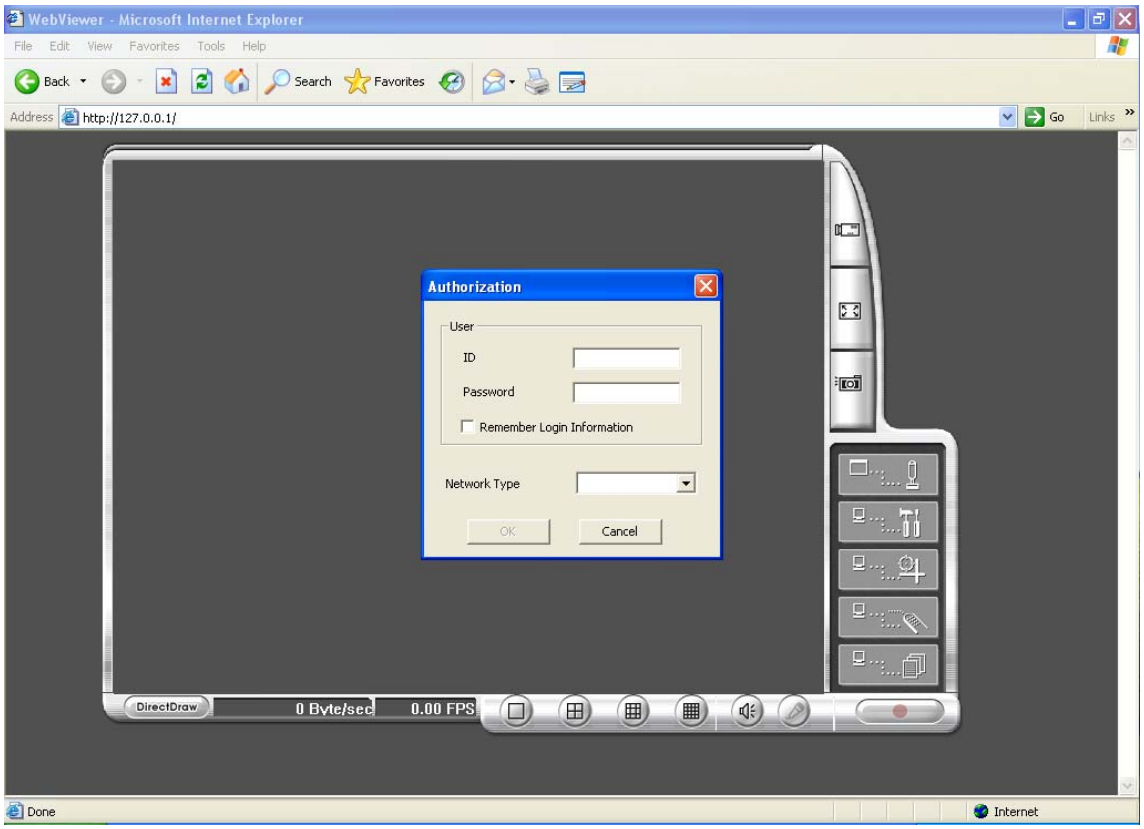


And then, Click **Install** when the Internet Explorer - Security Warning dialog box appears.



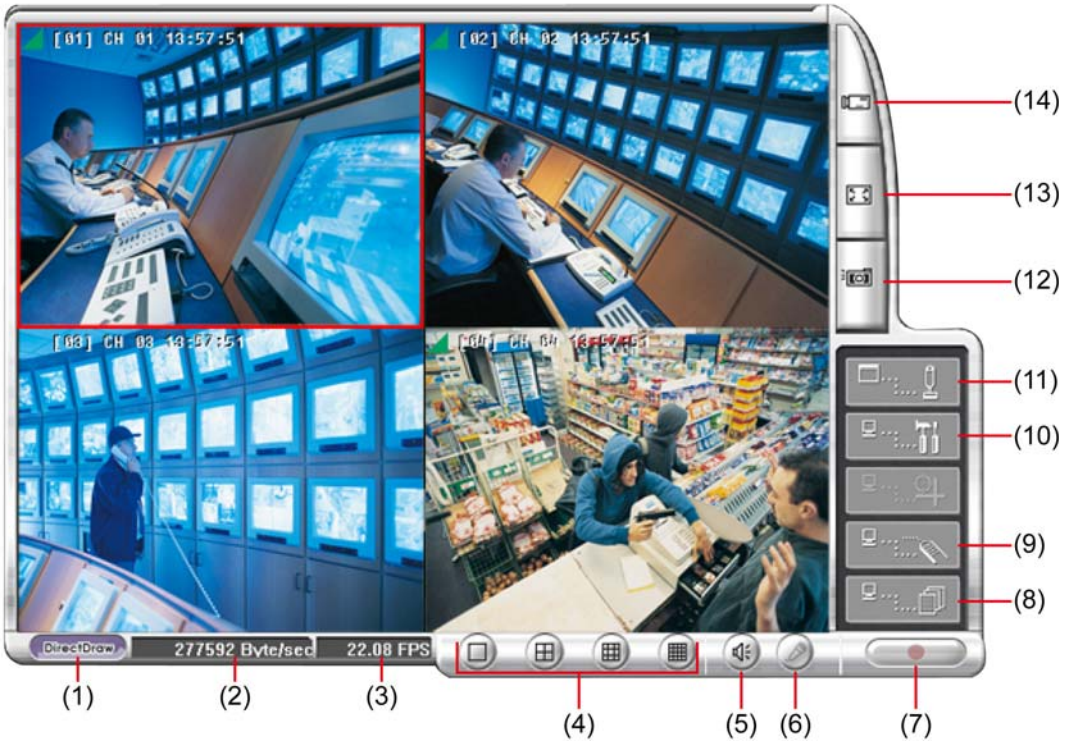
After installing the WebCamX.cab and when connecting to the DVR system, you are required to enter default account ID (Admin; capital in first letter) and password (111111) and select the type of network.

Changing account password is strongly recommended.



7.1 Familiarizing the WebViewer Buttons

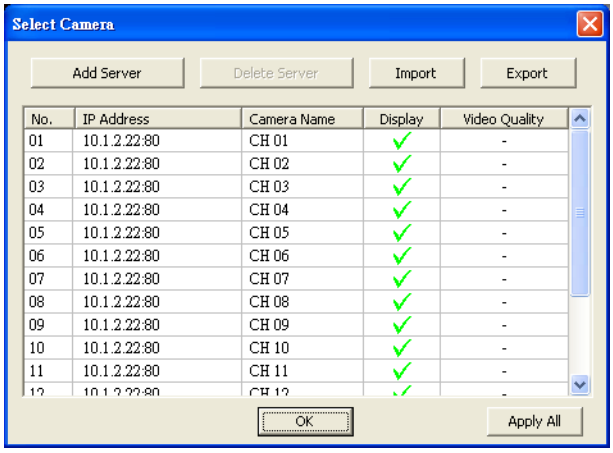
Right-clicking on the WebViewer video screen, enables you to start video recording, change video quality, switch camera and enable/disable DirectDraw.



Name	Function
(1) DirectDraw	Enhance the video quality.

Not all graphic cards can support this function. If you cannot see the screen display correctly or screen is messed, please check with VGA card vendor.

(2) Received file size	Indicate the size of the data being sent per second.
(3) Camera frames	Indicate the number of frames per second.
(4) Split screen view	Select from 4 different split screen type to view the video from remote DVR server. If only have 4 cameras, it unable switch to 9 and 16-split screen mode.
(5) Audio	Enable/disable remote sound.
(6) 2-way Audio	Enable/disable 2-way audio function. This function allows the client and server to talk via internet using MIC. Make sure your microphone and speakers work before using this function. If the DVR server Talk to web-client setting is disabled, you won't be able to hear from the other side.
(7) Record	Start to record the video of the selected camera in AVI format. Directly click screen to select the channel that user wants to record and press **Record** button.
(8) Event Log Viewer	Display the Event logs, Operation logs, POS logs, System logs, and Network logs.
(9) Remote Console	Initiate Remote Console. It allows you to view video from remote DVR server (see also Chapter 7.3).

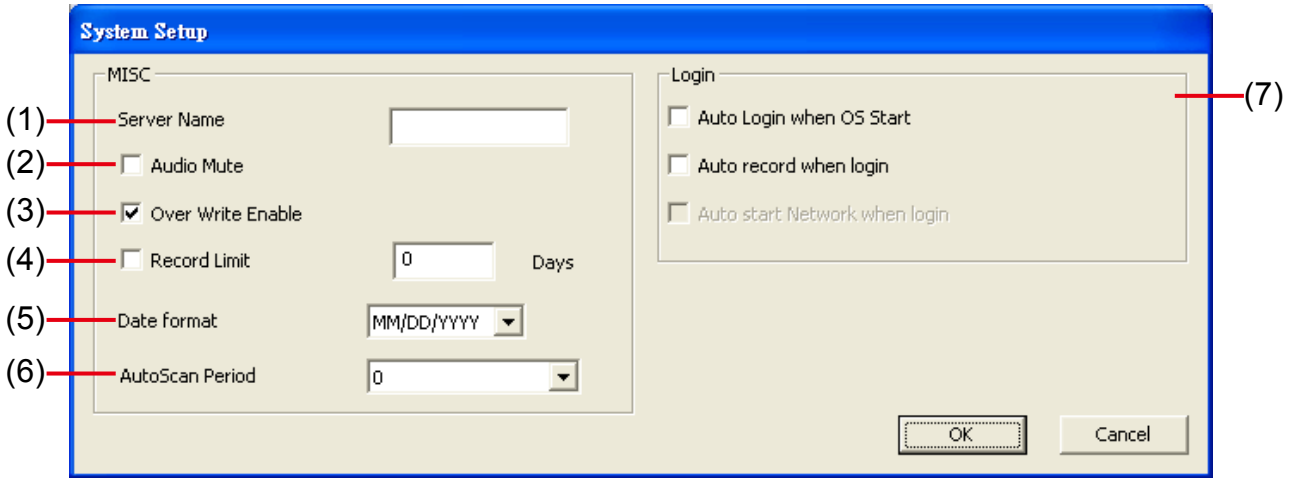
Name	Function
(10) Remote setup	Change the DVR server settings (see also Chapter 7.1.1).
(11) PTZ Control	Initiate PTZ camera controller(see also Chapter 7.2)
(12) Snapshot	Capture and save the screen shot in *.bmp format.
(13) Full screen	Use the entire area of the screen to only display the video. To return, Right-click or press **ESC** on the keyboard.
(14) Select cameras to view	Select to the view camera from different server. In Select Camera dialog box, Display column, click to enable/disable viewing the camera. Click **Add Server** and select the server type between DVR and IP Cam to add. Click **Delete Server** to delete the selected item. Click **Import** to load the previous saved list. Click **Export** to save the list. Click **Apply All** to change all the camera video quality based on the selected setting. Click **OK** to exit. 

7.1.1 To Setup Remote System Setting

Click **OK** to exit and save the setting and **Cancel** to exit without saving the setting. The setting here applies to Remote DVR system only.

After changed the DVR system setting, refresh your web browser in order to apply the new setting to the DVR system.

7.1.1.1 System Setup



(1) Server Name

Give the name for DVR server.

(2) Audio Mute

Enable/disable to hear audio sound of local DVR. To hear sound, make sure the unit is connected to an audio output device (ex: speaker). If user recorded video in audio mute status, there is no sound when playback

(3) Over Write Enable

Enable/disable replacing the earliest record when the hard disk space runs out. By default, the HDD overwrite setting is enabled

(4) Record Limit

If you want the system to automatically erase the data after a certain days, enable the **Record Limit** check box and enter the numbers of days in **Days** text box.

(5) Date Format

Select the display format of the date (yyyy/mm/dd, mm/dd/yyyy, dd/mm/yyyy)

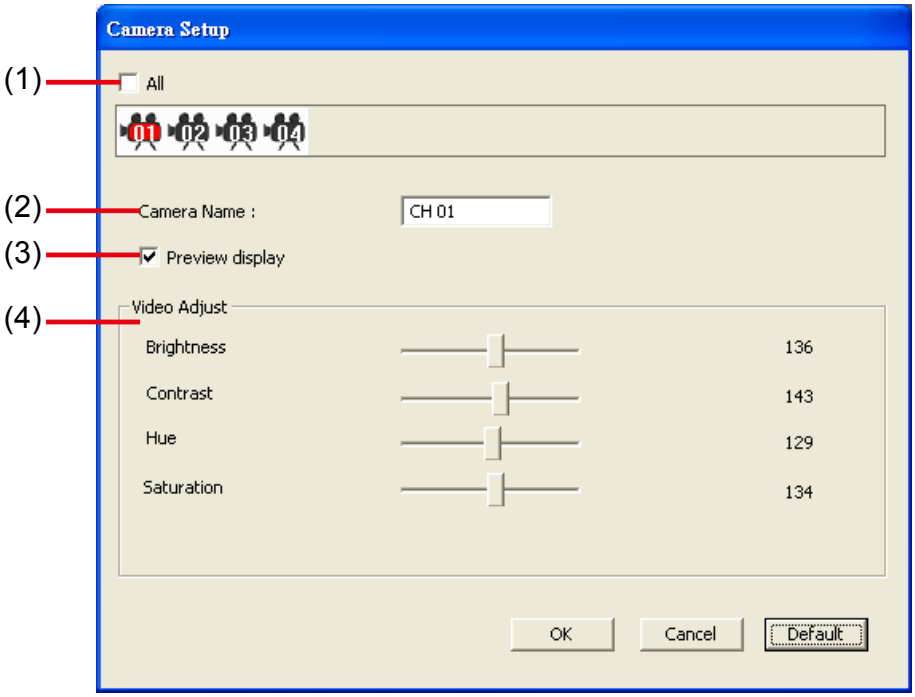
(6) Auto Scan Period

Enable/disable auto cycle switch to display the next channel when in full screen preview.

(7) Login

- **Auto Login when OS start**
  Automatically login when the DVR system is started.
- **Auto record when login**
  Automatically start video recording when the DVR system is executed.

7.1.1.2 Camera Setup



(1) Camera icon

Select the camera that user wants to set up. To select all cameras, mark **All**.

(2) Camera Name

Enter a name for the camera

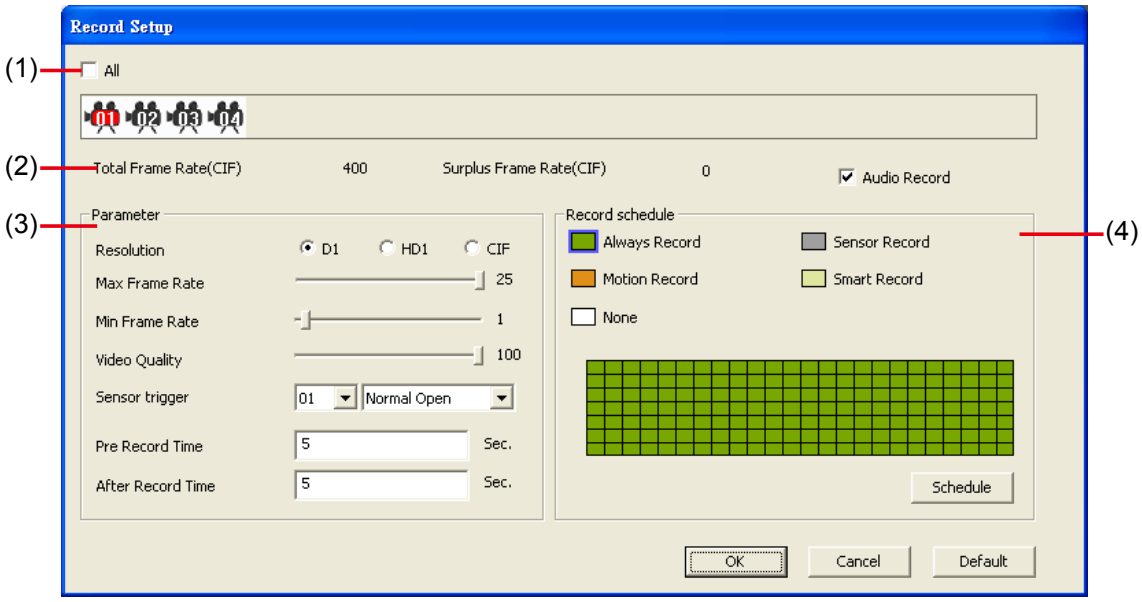
(3) Preview display

Enable/disable the previewing of selected camera on surveillance screen. When there is no video source on the camera, we suggest disabling it so that the system won't detect it as video loss error.

(4) Video Adjust

Select the camera and adjust the Brightness, Contrast, Hue and Saturation of the selected camera. Click **Default Value** to set all video setting back to the default.

7.1.1.3 Record Setup



(1) Camera icon

Select the camera that user wants to set up. To select channel 01~ 04, mark **All**.

(2) Frame Rate Info Display

Display the total frame rate and the available frame rate info that deepens on the **Max Frame Rate** and **Min Frame Rate** setting of every camera.

(3) Record Mode

- **Resolution**

  Select D1/CIF recording mode. Under D1 mode, the video recording is in full screen resolution and takes turns from one channel to the next one when Auto Scan enables. Each channel is recorded up to a maximum frame rate of 30/25fps(NTSC/PAL). User can switch to view the video in full screen or QUAD screen. Whereas in CIF mode, video recording is at a lower resolution, but each video is recorded in 30fps/25fps (NTSC/PAL). User can switch to view the video in full screen or QUAD screen

- **Max Frame Rate:** Set the maximum number of frames to be recorded during motion and motionless state. The higher the frame rate, it uses more hard disk space.
- **Min Frame Rate:** Set the minimum number of frames to be recorded during motion and motionless state. The higher the frame rate, it uses more hard disk space.
- **Video Quality:** Adjust the video quality. The higher the value, the lower the compression level and uses more hard disk space.
- **Sensor Trigger:** Customize the initial state of the attached sensor.

Condition	Description
NOT INSTALLED	Indicates that there is no sensor connected
NORMAL OPEN	Indicates that the initial state of the sensor is normal open. Video recording initiates when there is a changes in the sensor state
NORMAL CLOSE	Indicates that the initial state of the sensor is normal close. Video recording initiates when there is a changes in the sensor state

- **Pre Record Time:** set the time in second for the DVR system to pre-recording before the alarm happen.

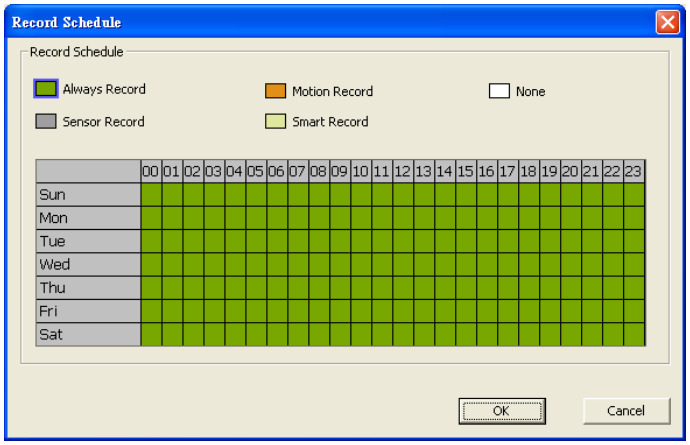
  After Record Time: set the time in second for the DVR system to continue recording after the alarm has ended.

(4) Record Schedule

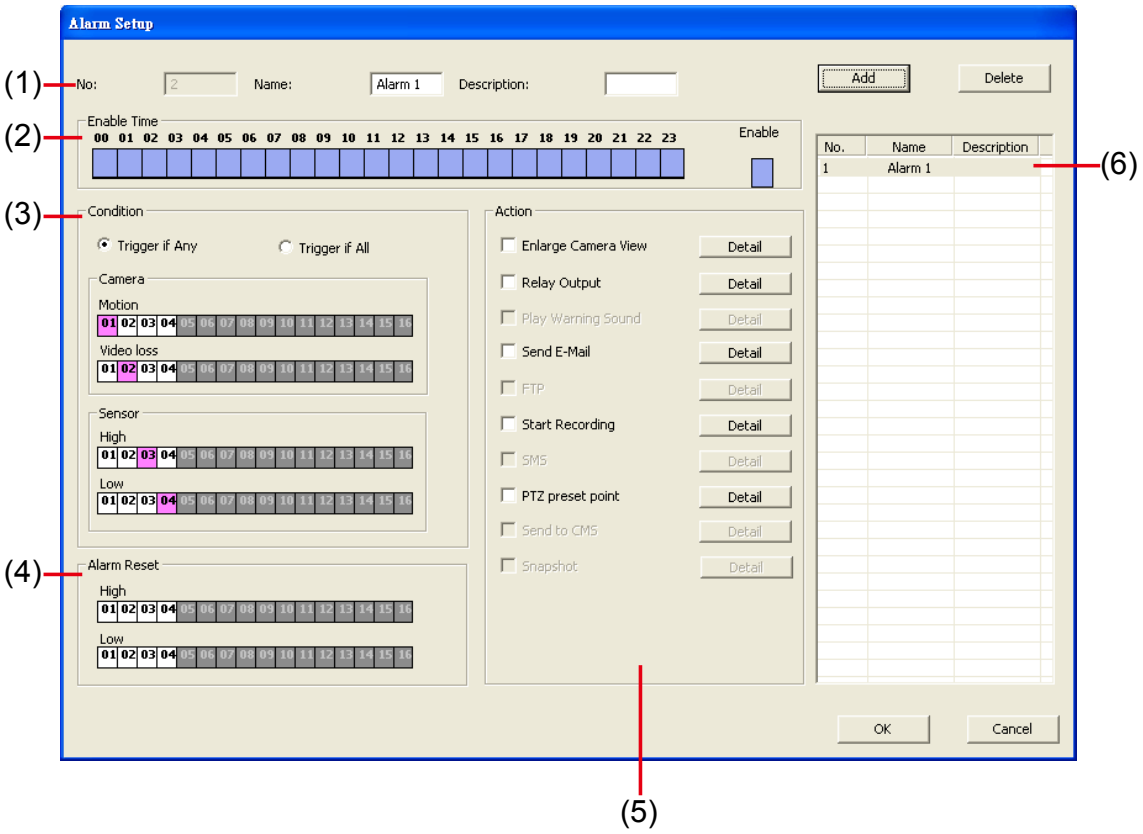
By default, in 24 hours, the recording schedule is set to always record every hour. Refer to the table below to customize the recoding condition.

Condition	Description
None	Disable video recording
Always Record	Record non-stop
Motion Record	Start recording when any movement is detected
Smart Record	Automatically switch to recorded at the maximum frame rate setting once a motion is detected and if there is no motion, it records at the minimum frame rate setting.
Sensor Record	Start recording when the sensor has triggered

Click **Schedule** to setup record schedule. Click the type of schedule and select hour (00~23) and click **OK** to complete the schedule setting.



7.1.1.4 Alarm Setup



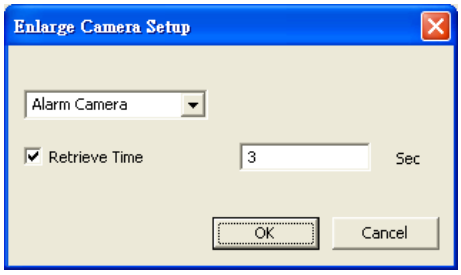
1. Select the alarm from **(6)** alarm list table.
2. In **(1)** user can change alarm **Name** and **Description**.
3. In **(2) Enable Time**, the number from 00 to 23 represent the time in 24-hour clock. Click the time that user want to activate or deactivate the alarm function.
4. Select the **(3) Condition**:
   - Select **Trigger Any** to activate if it falls to one of the conditions or **Trigger All** to activate if it falls to all conditions.
   - Set condition of **Camera**.
     - ✓ **Motion Detected:** click on the camera number (01 to 04) to set the condition for the system to alarm.
     - ✓ In **Video Loss**, click the camera number (01 to 04) to set the alarm condition when video is lost.
     - ✓ Set condition of **Sensor**. Click on the sensor number to set the condition for the system to alarm. If the sensor normal status is high, set the sensor condition to low.
5. Set condition of **(4) Reset Alarm**. Click the camera number to set the reset condition of alarm. Once alarm is reset, all alarm action will stop at the moment.
6. Setup **(5)** actions of alarm.
   - **Enlarge Camera View**

     Switch to only display video in Preview/Advanced mode from where the alarm is activated.

     a. Select the camera from drop down list to specify which camera video to be enlarged on screen when the alarm is triggered.
        - ⊙ **Alarm Camera:** when a channel has an alarm occurred, and then, the channel video that has an alarm occurred will be enlarged on screen.
        - ⊙ **Camera # (1~04):** the selected channel video that will be enlarged on screen when an alarm is activated.

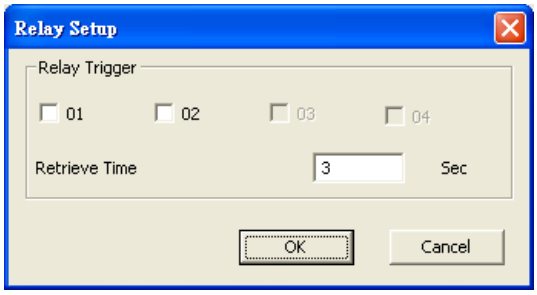
     b. **Retrieve time:** set the waiting duration before system switching back to original Preview

mode. If the retrieve time is un-mark, the alarm video will keep enlarging until user switch back to Preview mode manually.



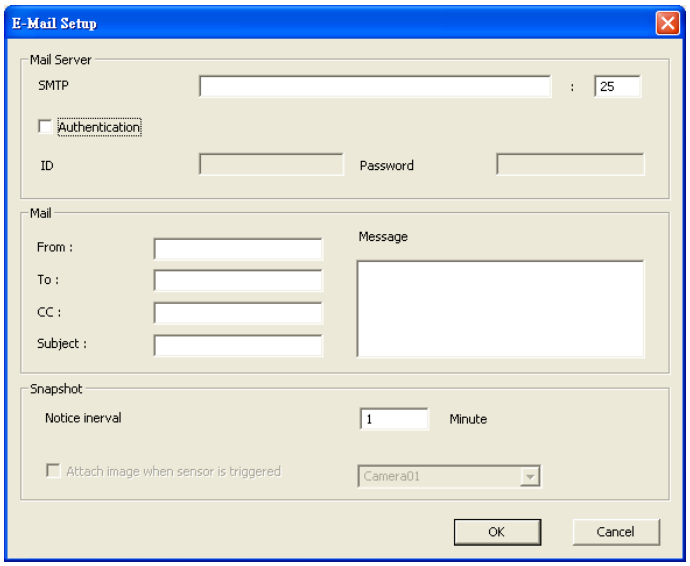
- **Relay Output**

  Set to enable/disable the relay operation when the alarm is activated and to extend additional time in second before it stops the relay operation. In the Relay Setup dialog box, mark from the available relay list; set to enable/disable the relay operation when the alarm is activated. Set the **Retrieve time**, you may to extend the relay operation time and set the duration in second. Click **OK** to exit and accept the setting and **Cancel** to exit without saving the setting.



- **Send E-mail**

  Send an electronic text message.



  ✓ **Mail Server**

  Enter the **SMTP** Server and port. If your e-mail system requires user identification, enable **Authentication** check box and enter **ID** and **Password**.

  ✓ **Mail**

  To check if it is working, click **Test** button.

  From: Enter the sender e-mail address.

  To and CC: Enter the recipient email address and separate it with comma or a semicolon (;).

  Subject: Enter the message title.

Message: Type the message.

✓ **Email Notice Setting**

Notice Interval: Set the period of time before it sends another e-mail notice.

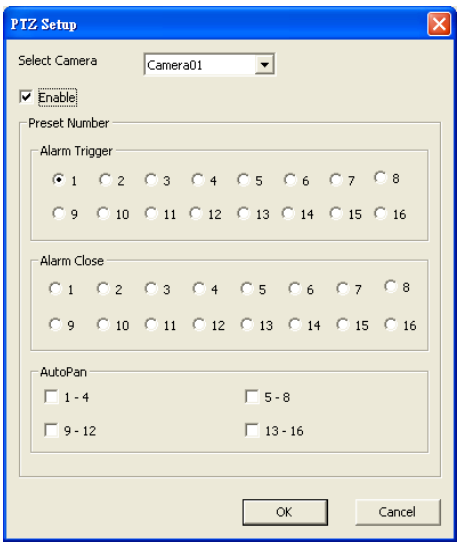
- **Start Recording**

Record the video from the selected camera.

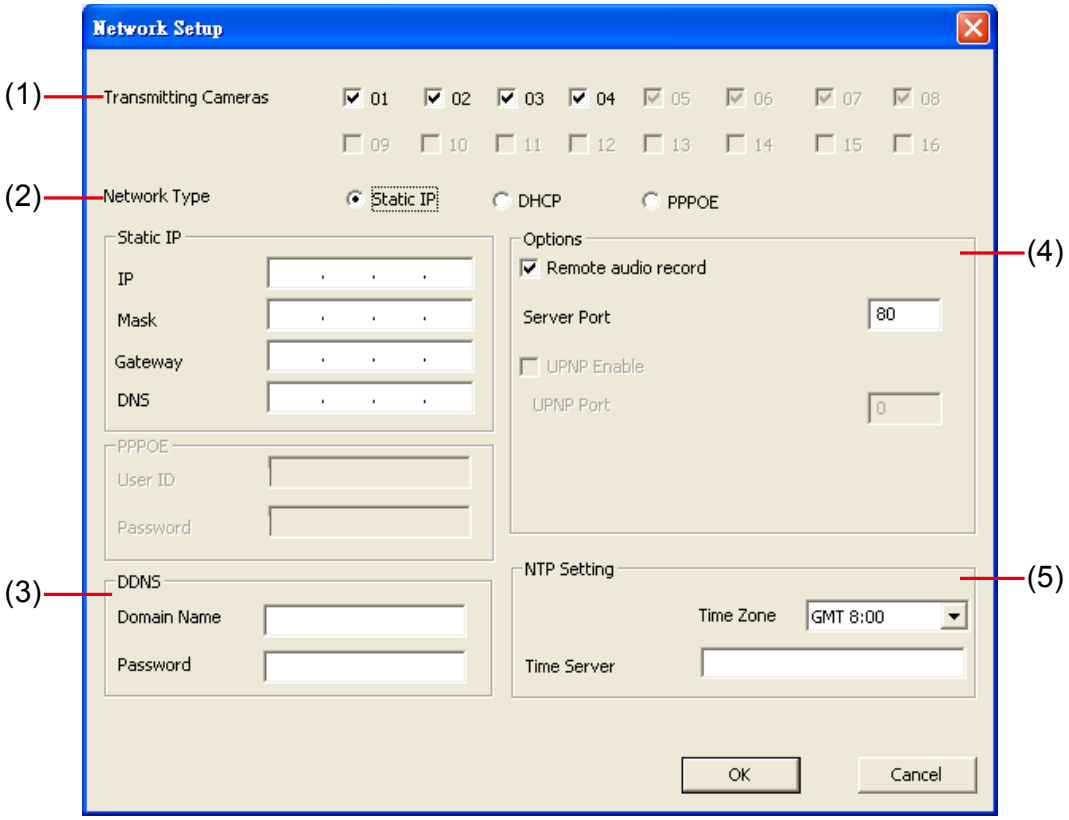
1. Select the camera to enable/disable video recording. Mark **All** to select all cameras.
2. In the Frame Rate selection, select **As Setting** to record the number of frames based on the Recording Setting or **Max** to record the maximum of frames based on the available speed.
3. In the **Start Recording prior** text box, mark and set the number in second for the DVR system to pre-recording before the alarm happen.
4. In the **Stop Recording after** text box, mark and set the number in second for the DVR system to continue recording after the alarm has ended. If user doesn't mark and set the time, the alarm recording will continue recording until alarm is reset.
5. Click **OK** to complete the setting.

- **PTZ Preset Point**

Position the PTZ camera based on the preset point setting. Beside the PTZ preset point check box, click **Detail**. In the **PTZ Setup** dialog box, select the PTZ camera number then mark the **Enable** check box. Select the **Alarm Trigger** and **Alarm Close** of the PTZ camera when the alarm is activated and ended. User also can select **Auto Pan** group as alarm is activated and ended.



7.1.1.5 Network Setup



(1) Transmitting Cameras

Select the camera to disable/enable camera can be view from remote site.

(2) Network Type

Select the IP Mode – Static IP, DHCP, or PPPOE

- **Static IP:** Assign a fixed and global IP address for the DVR system
  - ✓ **IP:** Assign a constant IP address which real IP addresses from ISP.
  - ✓ **Mask:** Enter the subnet mask of the IP address which user has assigned to DVR system.

> It is a bitmask used to tell how many bits in an octet(s) identify the sub network, and how many bits provide room for host addresses.

  - ✓ **Gateway:** Enter the network gateway IP address
  - ✓ **DNS:** Domain Name Server translates domain names (such as www.abb.com.tw) to IP addresses. It will translate the domain name into IP address when DVR system request.
- **PPPOE**

  Point-to-Point Protocol over Ethernet is a network protocol for encapsulating PPP frames in Ethernet frames. It is used mainly with ADSL services.
  - ✓ **User ID & Password:** fill in the user account and password that user applied from your ISP for PPPOE connection.
- **DHCP:** Assign the IP address by local DHCP server to DVR system.

> The Dynamic Host Configuration Protocol (DHCP) is a set of rules used by a communications device (such as a computer, router or networking adaptor) to allow the device to request and get an Internet address from a server which has a list of addresses available for assignment.

(3) DDNS

DDNS (Dynamic Domain Name Service) is a data query service mainly used on the Internet for

translating domain names into Internet addresses. Users can register their own domain name on **http://ddns.avers.com.tw**. (See Appendix A)

- **Domain Name**
  Enter the domain name that user wanted.
- **Passowrd**
  A password use to access DDNS to register the domain name.

(4) Options

- **Remote Audio Recording**
  Enable/disable audio recording when recording at remote site.
- **WebViewer Port**
  A port is using for the remote connection. Any port can be assigned as a server port, except the ports already used by the network services.

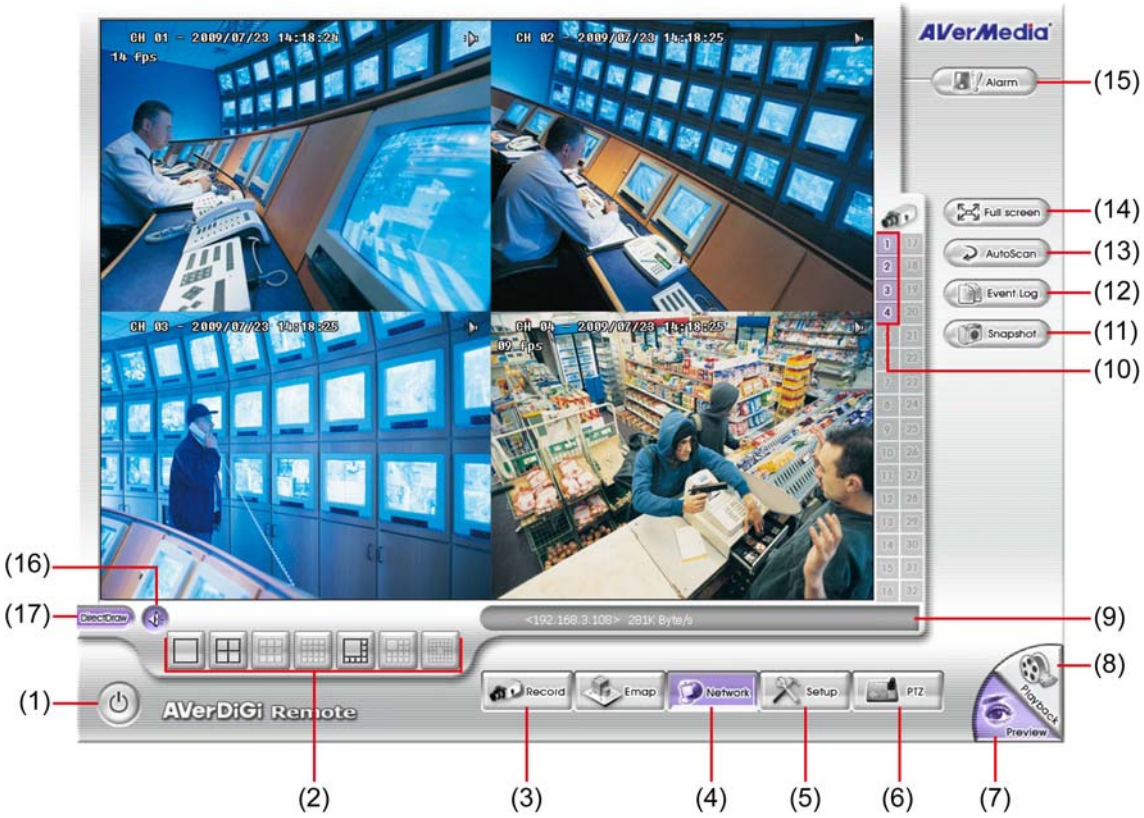
(5) NTP Setting

Adjust the DVR system time same as network time server. Fill in the **Time Server** IP address or domain name and select the **Time Zone** that DVR is located.

7.2 Familiarizing the WebViewer PTZ Buttons

Name	Function
(1) Direction buttons	Adjust and position the focal point of the PTZ camera. Click the center to pan automatically.
(2) Zoom +/-	Zoom in and out the image.
(3) Select PTZ	Choose to enable/disable the PTZ camera. In the Select PTZ dialog box, Select column, click to enable/disable viewing and controlling the PTZ camera. Click **OK** to exit and save the setting and **Cancel** to exit without saving the setting.
(4) Focus +/-	Adjust the focus manually to produce clear image.
(5) Auto Pan Groups	Operate the PTZ cameras automatically based on the selected camera group preset position number.
(6) Camera preset position number	Move the PTZ camera to the preset point. The reset point (1~9) is based on the user has setup at local site.

7.3 Familiarizing the Remote Console Buttons



Name	Function
(1) Exit	Close/minimize remote console application
(2) Split Screen Mode	Select from 3 different split screen type to playback the recorded video file of all the camera or one camera on a single screen.

If only have 4 cameras, it unable switch to 9, 13, 16, and 32-split screen mode

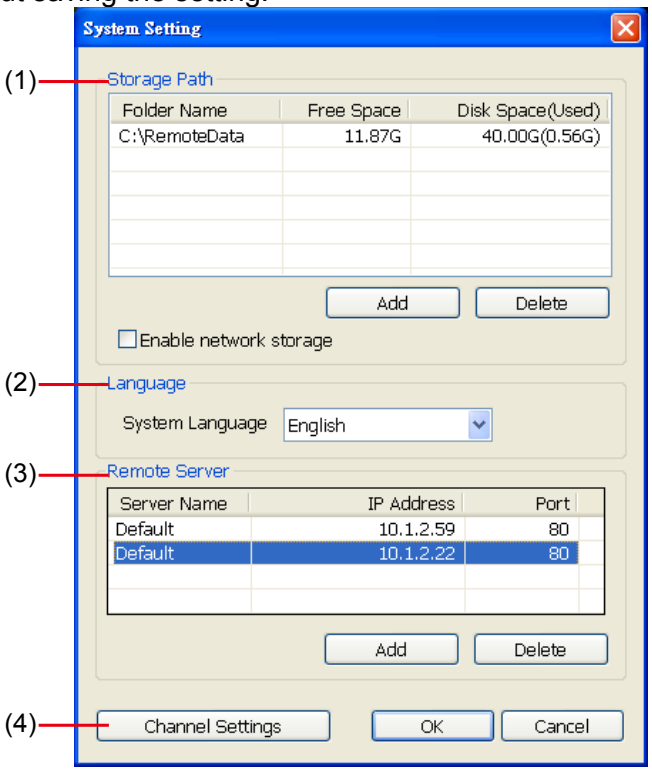
(3) Record	Start/stop video recording.
(4) Network	Enable/disable remote system access. This feature allows you to access DVR server from a remote location via internet connection.
(5) Setup	Configure the Remote Console setting. (see also Chapter 7.2.1)
(6) PTZ	To call out PTZ control panel for controlling PTZ camera.
(7) Preview	Switch to Preview/Playback mode. This allows you to view live camera display.
(8) Playback	Switch to Playback mode. This allows you to view the recorded video file. (see also Chapter 7.4)
(9) Status Bar	Display the current date, time and hard disk free space.
(10) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(11) Snapshot	Capture and save the screen shot either in *.jpg or *.bmp format.
(12) Event Log	Show the record of activities that take place in the system. To filter the records, select and click the option button to only display Event, System, Operation, Network or POS.
(13) Auto Scan	Enable/disable channel auto cycle switch.
(14) Full screen	Use the entire area of the screen to only display the video. To return, Right click the mouse or press **ESC** on the keyboard.

Name	Function
(15) Alarm	Alert and display warning info. Only Administrator-level can reset and turn on, off and trigger the Sensor and Relay by right-clicking the item in the Sensor and Relay list.
(16) Audio	Enable/disable the sound display
(17) DirectDraw	Enhance the video quality.

Direct Draw function supports for certain VGA card. For more information, please contact your VGA card vendor.

7.3.1 To Setup Remote Console Setting

Click **Setup** button to call out the **System Setting** windows. Click **OK** to exit and save the setting and **Cancel** to exit without saving the setting.



(1) Storage Path

Set the directory on where to save the data. When there is not enough free space to record one hour data, the system automatically replaces the oldest data. In case you have more than one storage path, the system automatically saves the data to the next storage path. By default the data is stored in C:\RemoteData, to insert another storage path, click **Add**. To remove the selected path, click **Delete**.

- **Enable network storage**
  Select the Enable network storage check box to send the recorded video in network attached storage.

To add network storage, the Internet storage drive/folder must be mapped as **Network Driver** in DVR server. To know how to assign or connect to a network drive, please refer to your Windows help file and search "**Map Network drive**".

(2) Language

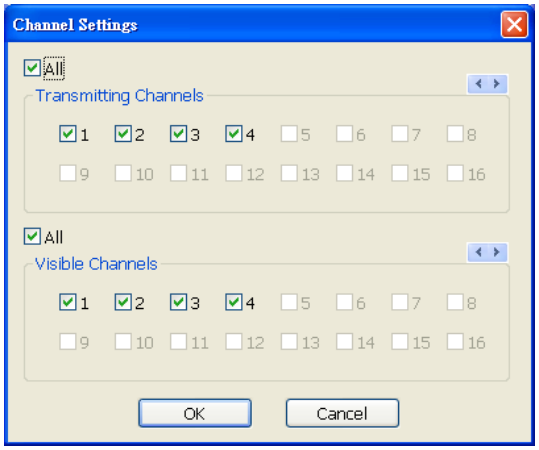
Customize the system to display the tool tips and dialogs based on the selected language. By default the language is in English.

(3) Remote Server

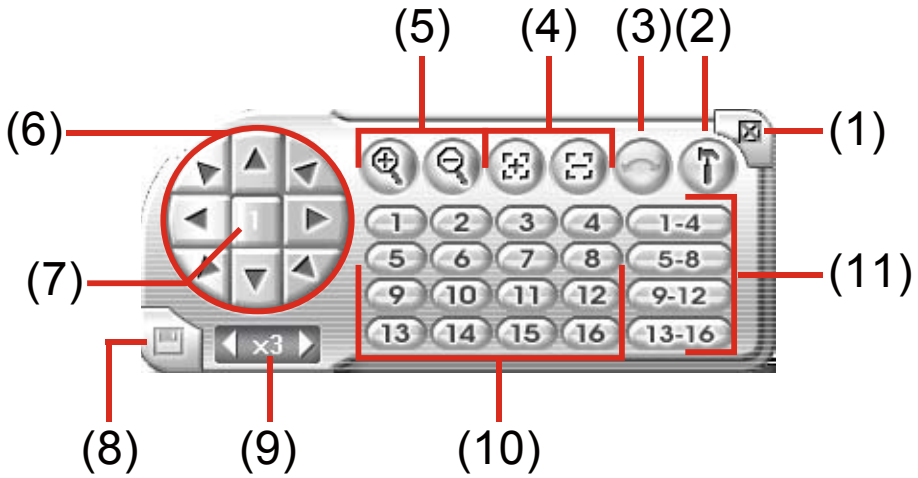
Enter the DVR **Server IP** and **Server Port** number that user wants to remote connect it.

(4) Channel Settings

The numbers from 1 to 04 represent the camera ID. In **Transmitting Channels** section, enable the camera number to receive the camera signal from the server. In **Visible Channels** section, enable the camera number to view the camera signal on Remote Console screen. To select all the cameras, enable the **ALL** check box.



7.3.2 Familiarizing the Buttons in PTZ Camera Controller

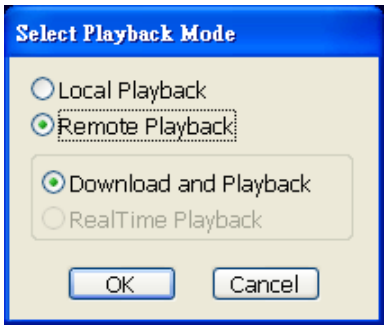


Name	Function
(1) Close	Exit PTZ camera controller.
(2) Setup	Configure PTZ cameras.(also see Chapter 3.2.3)
(3) AutoPan	Operate the PTZ cameras automatically based on the selected camera group preset position number.
(4) Focus +/-	Adjust the focus manually to produce clear image.
(5) Zoom +/-	Zoom in and out the image.
(6) Direction buttons	Adjust and position the focal point of the PTZ camera.
(7) Camera ID pane	Display the PTZ camera number that is being operated.
(8) Save Camera preset position	Save the PTZ camera preset position number. Select the camera and click the preset position number and save it.
(9) Camera lens speed controller	Adjust the moving speed of the PTZ camera lens.
(10) Camera preset position number	Move the PTZ camera to the preset point.
(11) Group AutoPan	Select to automatically operate PTZ camera in group.

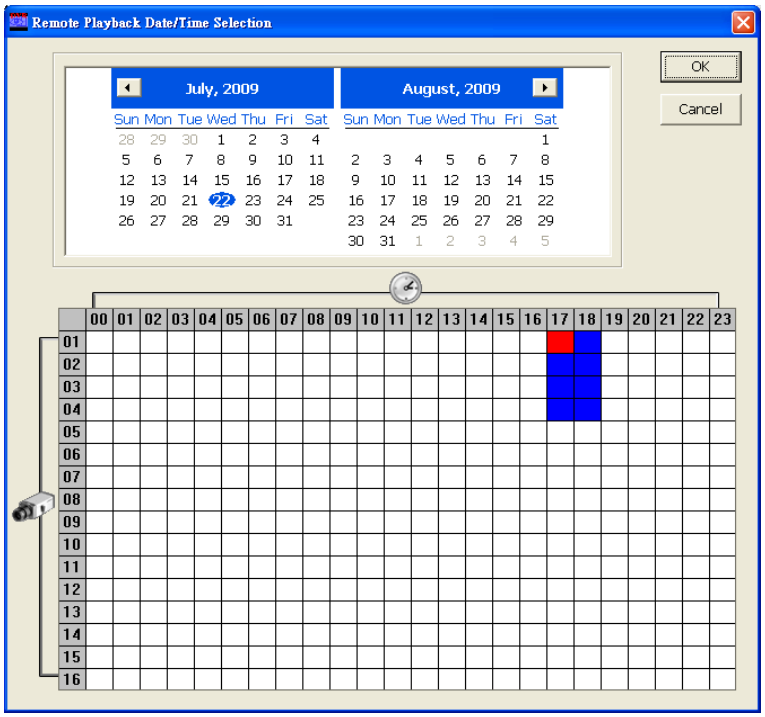
7.4 Using the Remote Playback

To use this feature, first switch to playback mode by clicking the **Playback** icon, and then, select the source of the file. In the **Select Playback Mode** dialog box, choose **Local Playback** to open the file that is recorded in the Remote Console, and **Remote Playback** to open the file that is recorded on the DVR server.

Click **OK** to proceed and **Cancel** to void this operation.

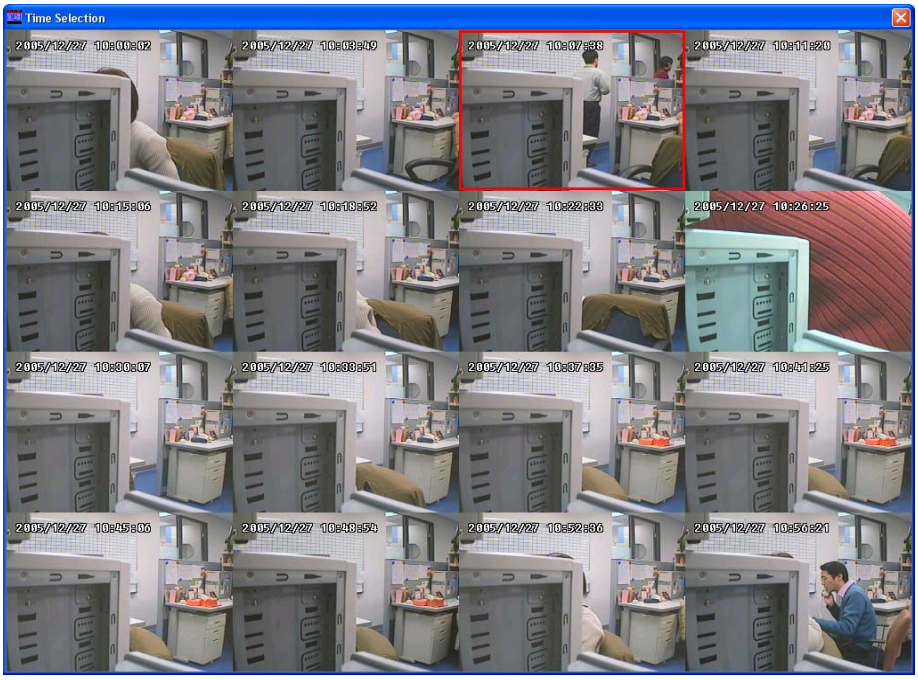


In the Remote Playback Date/Time Selection, the number from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 04 represent the camera number.

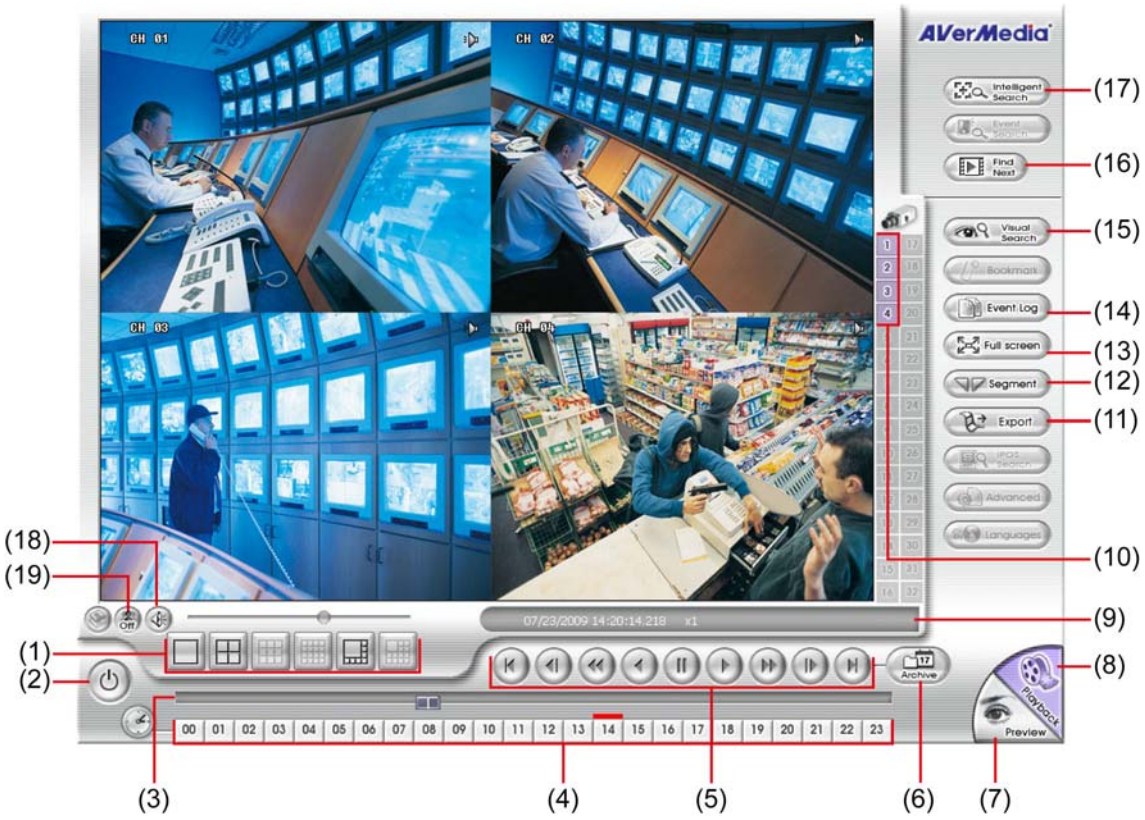


To Make a Selection:

1. Select the date in the calendar. Use ◄ and ► buttons to shift the calendar to the left or right.
2. In the table below, click on the blue block to select and open the recorded file. The blue block turns red when it is selected. The block that appears in white doesn't have data. You can only select one block when you choose Download and Playback.
3. Click **OK** to proceed and **Cancel** to void this operation.
4. The system divides the selected hour into 16 video thumbnails. In the Time Selection screen, click on the video thumbnail you want to download (see also Chapter 7.4.3).


Time Selection
2005/12/27 10:00:02
2005/12/27 10:03:49
2005/12/27 10:07:38
2005/12/27 10:11:20
2005/12/27 10:15:06
2005/12/27 10:18:52
2005/12/27 10:22:33
2005/12/27 10:26:25
2005/12/27 10:30:07
2005/12/27 10:33:51
2005/12/27 10:37:35
2005/12/27 10:41:25
2005/12/27 10:45:06
2005/12/27 10:48:54
2005/12/27 10:52:36
2005/12/27 10:56:21

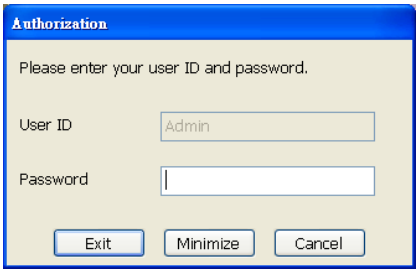
7.4.1 Familiarizing the Local Playback Buttons



Name	Function
(1) Split Screen Mode	Select from 6 different split screen type to playback the recorded video file of all the camera, or one camera over the other or alongside on a single screen.

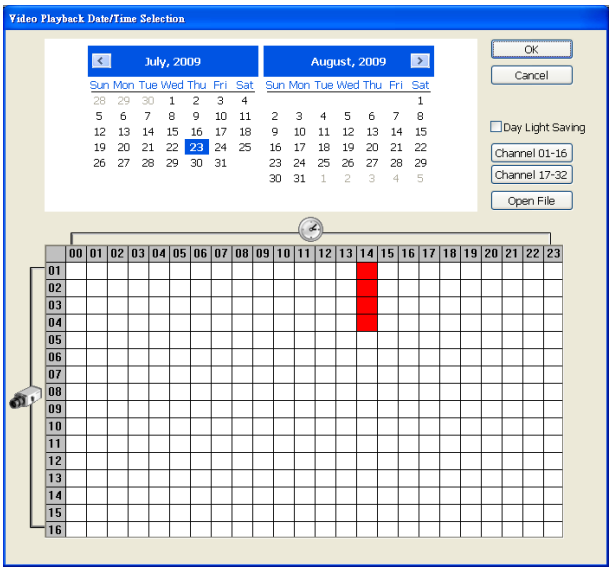
- If there are only 8 cameras, you won't be able to switch to 16, and 13 split screen mode.
- To zoom in an area on the screen, Right click and Drag a square on the area you want to enlarge. To back to normal view, right click the channel screen again.

(2) Exit	Click to exit or minimize the application. The password is required for exit or minimize.



(3) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(4) Hour Buttons	Select and click to playback the recorded video file on the specific time frame.

The Hour buttons represent the time in 24-hour clock. The blue bar on top of the hour button indicates that there is a recorded video file on that period of time. If there is no recorded data within the hour, there will be no color bar on top of the hour button. While the red bar indicates that you are currently viewing the recorded video file.

Name	Function
(5) Playback Control Buttons	**Begin:** Move at the beginning of the recorded video file. **Previous:** Go back to the previous frame. **Slower:** Play the recorded video file at the speed of 1/2x, 1/4x, or 1/8x. **Rewind:** Wind back the video file. **Pause:** Briefly stop playing the recorded video file. **Play:** Play the recorded video file. **Faster:** Play the recorded video file at the speed of 2x, 4x, 8x, 16x or 32x. **Next:** Go to the next frame. **End:** Go to the end of the video file.
(6) Archive	Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file. – Also, user can open the recorded file from certain location by click **OPEN FILE** button – Mark **Day Light Saving**, the playback calendar will show the available playback records during day light saving period. 

The numbers from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera ID. While the red colored column indicates on where to start playing the recorded video file. If there is no any video data, it will be no color bar on top of the date button.

(7) Preview	Switch to Preview mode.
(8) Playback	Switch to Playback mode. This allows you to view the recorded video file.
(9) Status bar	Display the record date, time, HDD capacity in preview mode and play speed in playback mode.
(10) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(11) Export	Export includes Snapshot, Print, and Output function. ■ **Snapshot:** Capture and save the screen shot either in *.jpg or *.bmp format. ■ **Print:** Print the screen shot. ■ **Output:** Save the segmented file in *.avi format
(12) Segment	Keep a portion of the recorded video you want (see also Chapter 7.4.1.1).
(13) Full screen	View in Playback-compact mode. To return, press the right button of the mouse or ESC on the keyboard.
(14) Event Log	Show the record of activities that take place in the system. To filter the records, select and click the option button to only display Event, System, Operation, Network or POS.
(15) Visual Search	Search from a specific camera by Date, Hour, Minute, 10 Seconds and Second. (See also Chapter 7.4.1.2)

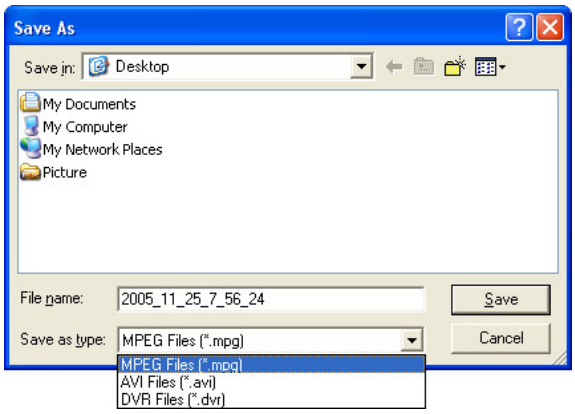
Name	Function
(16) Find Next	Search for the next event or changes in the motion detector frame. You can use this when you are using Intelligent Search or Event Search function.
(17) Intelligent Search	Search the changes in the motion detector frame (See also Chapter 7.4.1.3).
(18) Audio	Enable/disable audio play
(19) De-interlace	To enhance the video quality. Set the de-interlace mode to #1, if you are capturing motionless picture and #2, if it captures lots of movement.

7.4.1.1 To Cut and Save the Wanted Portion of the Recorded Video

5. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to start the cut. Then, click **Segment** to set the begin mark.

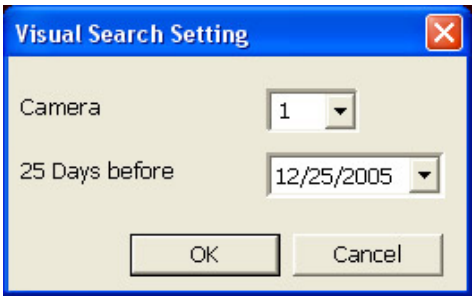
6. Use the Playback Control buttons or drag the bar on the playback progress bar and pause on where you want to end the cut. Then, click **Segment** to set the end mark. To cancel segmentation or set the segment marks from the start, click Segment button again.

7. Click **Export >> Output** button to save the wanted clip.
8. In the **Save As** dialog box, locate on where you want to save the file, type the filename, and select the video format.



7.4.1.2 To Search Using the Visual Search

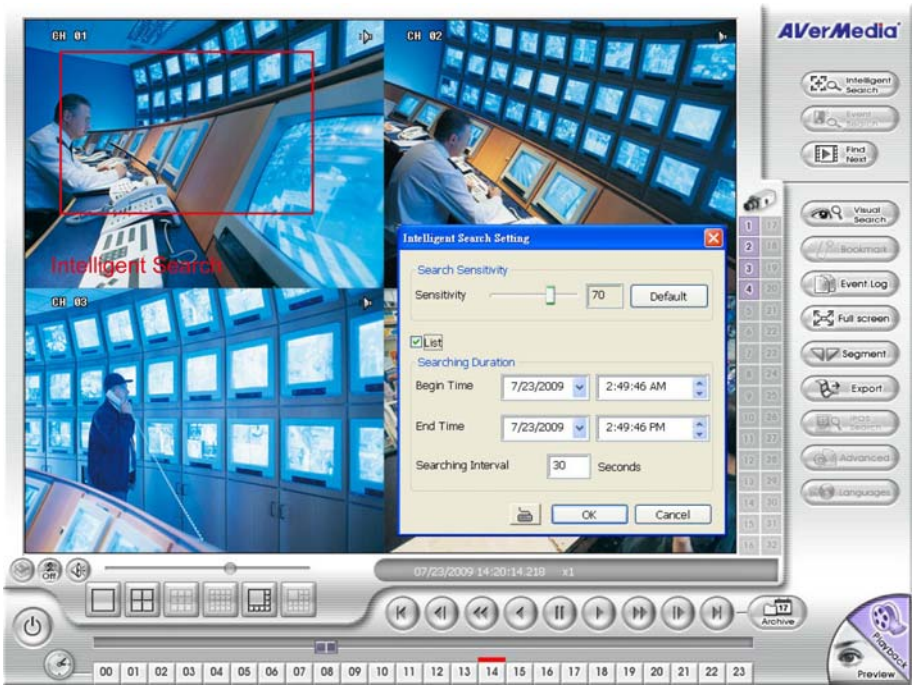
4. Click **Visual Search**.
5. In the Visual Search Setting dialog box, select the Camera number and the date. Then click **OK**.



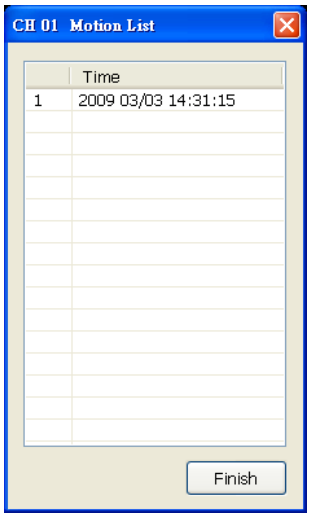
6. When a series of frames appear by date, click on the frame to display another series of frames and search by every Hour of that date, every 3Minutes of that hour, every 10 Seconds of that minute, every Second of that 10 seconds. To go back, click. To view from the selected frame and close event search, click.

7.4.1.3 To Search Using the Intelligent Search

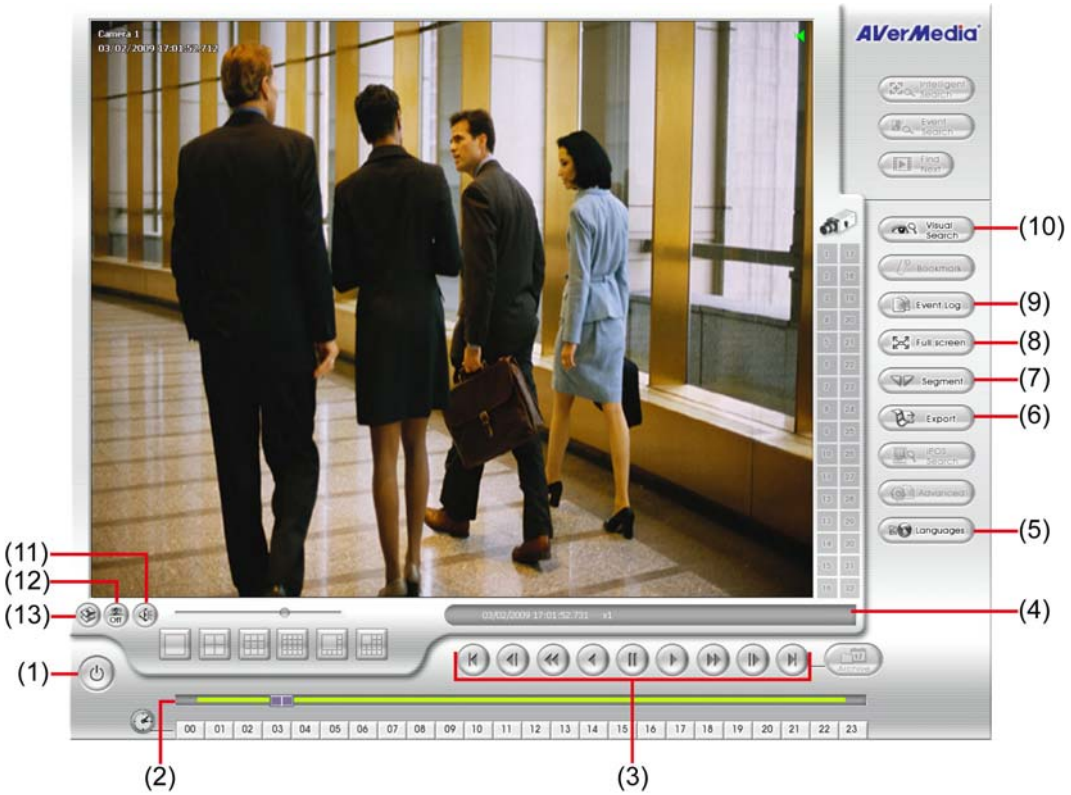
1. Click on the video screen on where you want to search.
2. Click **Intelligent Search**. The Intelligent Search text (red) would appear at the lower left corner of the screen.



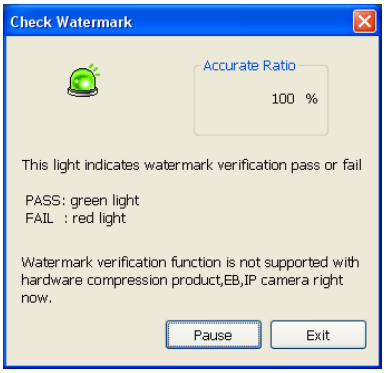
3. When the Intelligent Search Setting dialog box and motion detector frame appear, you may adjust the sensitivity bar and the motion detector frame size and location. To set motion detector frame size and location, left click and drag on the screen. Then, click **OK** to start searching. The video search would stop at the frame that matches the condition. To keep on searching click .
4. You may also set to search and list all the result. Just check the **List** box. In the Search Duration section, set the **Begin Time**, **End Time** and **Searching Interval**. Then, click **OK** to start searching. The search result will show as below figure:



7.4.2 Familiarizing the Download and Playback Buttons

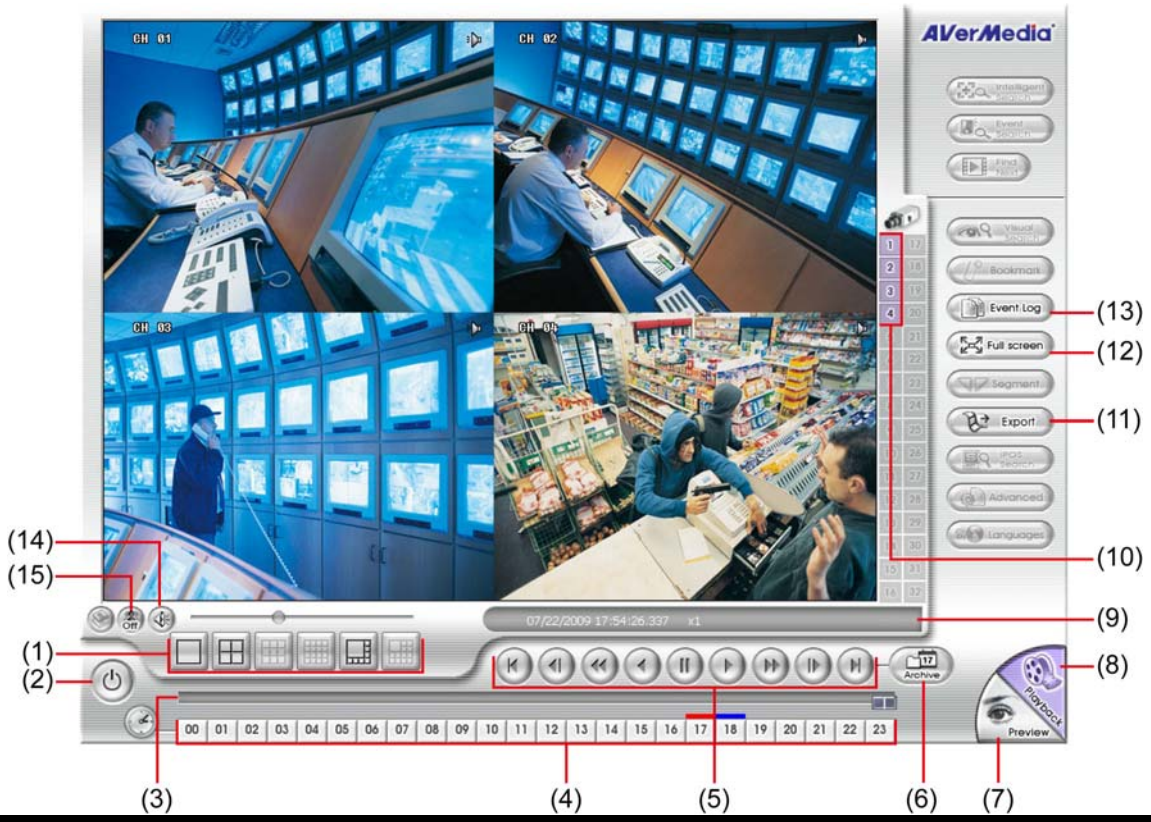


Name	Function
(1) Exit	Click to close the application.
(2) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(3) Playback Control Buttons	**Begin:** Move at the beginning of the recorded video file. **Previous:** Go back to the previous frame. **Slower:** Play the recorded video file at the speed of 1/2x, 1/4x, or 1/8x. **Rewind:** Wind back the recorded video file. **Pause:** Briefly stop playing the recorded video file. **Play:** Play the recorded video file. **Faster:** Play the recorded video file at the speed of 2x, 4x, or 8x, 16x or 32x. **Next:** Go to the next frame. **End:** Go to the end of the recorded video file.
(4) Status bar	Display the recorded date, time and play speed.
(5) Language	Switch the language of function/button tips
(6) Export	Export includes Snapshot, Print, and Output function. ■ **Snapshot:** Capture and save the screen shot either in *.jpg or *.bmp format. ■ **Print:** Print the screen shot. ■ **Output:** Save the segmented file in *.mpg, *.avi, or *.dvr format(see also Chapter 7.4.1.1)..
(7) Segment	Keep a portion of the recorded video. Follow the below steps to output a video clip (see also Chapter 7.4.1.1).
(8) Full screen	View in Playback-compact mode. To return, press the right button of the mouse or ESC on the keyboard. When you switch to full screen in multiple-screen mode, **Left** click to toggle to only display one of the video in the multiple-screen mode or all.
(9) Event Log	Show the record of activities that take place in the system. To filter the records, select and click the option button to only display Event, System, Operation, Network or POS.

Name	Function
(10) Visual Search	Search from a specific camera by Date, Hour, Minute, 10 Seconds and Second. (See also Chapter 7.4.1.2)
(11) Audio	Enable/disable volume
(12) De-interlace	To enhance the video quality. Set the de-interlace mode to #1, if you are capturing motionless picture and #2, if it captures lots of movement.
(13) Watermark	To verify the playback video has not been modified. Click to check the video. Watermark verification windows will show up as following: 

Watermark verification doesn't support on hardware compression products and video that is recorded from IP camera.

7.4.3 Familiarizing the RealTime Playback Buttons



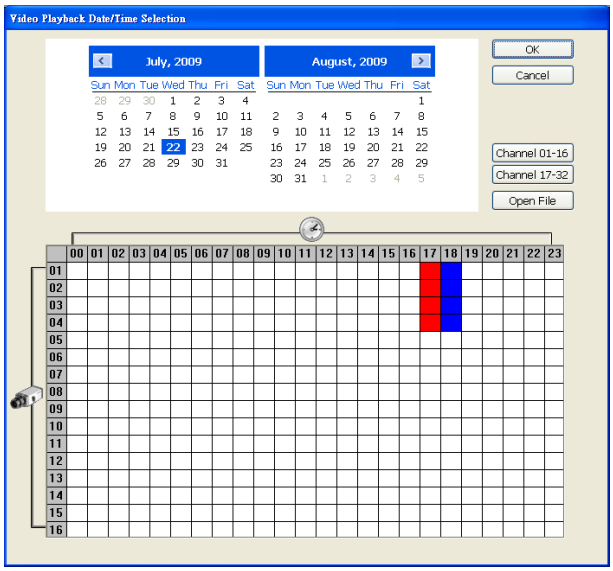
Name	Function
(1) Split Screen Mode	Select from 3 different split screen type to playback the recorded video file of all the camera, or one camera.

- If there are only 4 cameras, you won't be able to switch to 9, 16, and 13 split screen mode.
- To zoom in an area on the screen, **Right** click and **Drag** a square on the area you want to enlarge.

(2) Exit	Click to close the application.
(3) Progress bar	Show the progress of the file being played. You may move the bar to seek at any location of the track.
(4) Hour Buttons	Select and click to playback the recorded video file on the specific time frame.

The Hour buttons represent the time in 24-hour clock. The blue bar on top of the hour button indicates that there is a recorded video file on that period of time. While the red bar indicates that you are currently viewing the recorded video file.

(5) Playback Control Buttons	**Begin:** Move at the beginning of the recorded video file. **Previous:** Go back to the previous frame. **Slower:** Play the recorded video file at the speed of 1/2x, 1/4x, or 1/8x. **Rewind:** Wind back the recorded video file. **Pause:** Briefly stop playing the recorded video file. **Play:** Play the recorded video file. **Faster:** Play the recorded video file at the speed of 2x, 4x, or 8x, 16x or 32x. **Next:** Go to the next frame. **End:** Go to the end of the recorded video file.

Name	Function
(6) Archive	– Select the date on the calendar and the time from 00 to 23 to where to start playing the recorded video file. – Also, user can open the recorded file from certain location by click **OPEN FILE** button – Click **Channel 01~ 16** and **Channel 17 ~ 32** button to switch to different channel group of playback calendar. – Mark **Day Light Saving**, the playback calendar will show the available playback records during day light saving period. 

The numbers from 00 to 23 represent the time in 24-hour clock. The numbers from 01 to 16 represent the camera ID. The blue colored column indicates that there is a recorded video file on that period of time. While the red colored column indicates on where to start playing the recorded video file.

(7) Preview	Switch to Preview mode.
(8) Playback	Switch to Playback mode. This allows you to view the recorded video file.
(9) Status bar	Display the recorded date, time and play speed.
(10) Camera ID	Show the number of cameras that are being viewed. When you are in single screen mode, click the camera ID number to switch and view other camera.
(11) Export	Export includes Snapshot, Print, Output Video Clip, and Backup function. ■ **Snapshot:** Capture and save the screen shot either in *.jpg or *.bmp format. ■ **Print:** Print the screen shot. ■ **Output Video Clip:** Save the segmented file in *.mpg, *.avi, or *.dvr format(see also Chapter 7.4.1.1)..
(12) Full screen	View in Playback-compact mode. To return, press the right button of the mouse or **ESC** on the keyboard. When you switch to full screen in multiple-screen mode, **Left** click to toggle to only display one of the video in the multiple-screen mode or all.
(13) Event log	Show the record of activities that take place in the system. To filter the records, select and click the option button to only display Event, System, Operation, Network or POS.
(14) Audio	Enable/disable audio play
(15) De-interlace	To enhance the video quality. Set the de-interlace mode to #1, if you are capturing motionless picture and #2, if it captures lots of movement.

Chapter 8 Using HandyViewer and JavaViewer

Users can use a mobile phone to access the DVR through Internet. Make sure your mobile phone support IE browser and is connected to the internet. To access the DVR server, open IE browser and enter **http://DVR IP/mobile**. You can see the latest screen shot. Click **<<** **>>** to change the channel or camera and **Refresh** to reload new screen shot.

8.1 Using PDAViewer to Access DVR Server

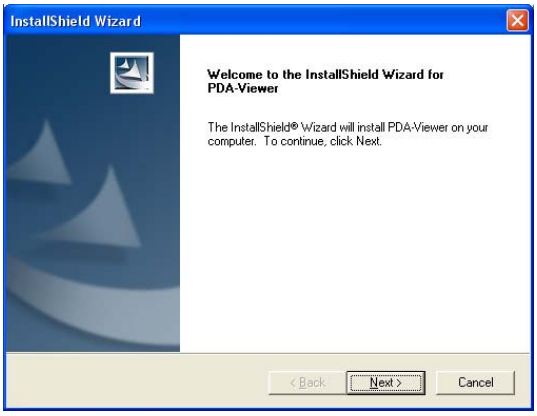
Users can also use a PDA to access the DVR through Internet. Make sure your PDA support IE browser and is connected to the internet. To use this feature, you need to install the PDA Viewer software either thru ActiveSync connection or download it from the internet. Please check if your PDA meets the 2 requirements below.

OS: MS Windows CE 4.0, PocketPC 2002/2003, Mobile 5 PDA version
CPU: ARM architecture

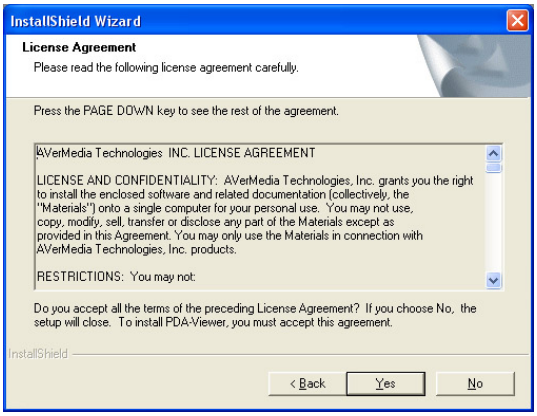
8.1.1 To install PDAViewer thru ActiveSync

1. Connect your PDA to your PC. Place the CD into the CD-ROM drive then click **Utilities** > **PDAViewer** > **Setup.exe**. And follow the on screen instructions.

2. Click **Next** to continue.

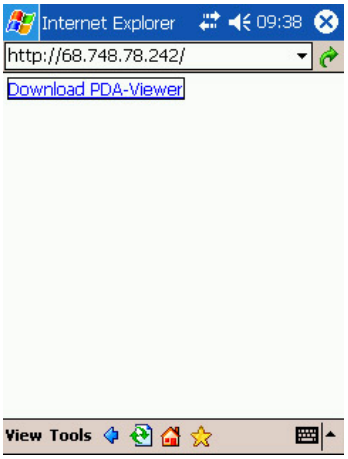


3. Read the license agreement and click **Yes** to accept all the terms. The system will then automatically install the application.

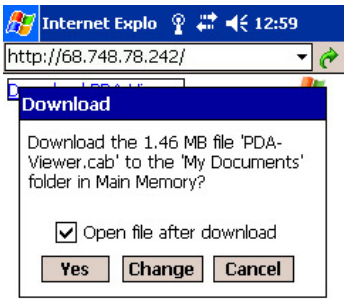


8.1.2 To install PDAViewer from the Internet

1. Make sure you are connected to the internet.
2. Open the web browser and enter the server IP. Then click the hyperlink **Download PDAViewer**.



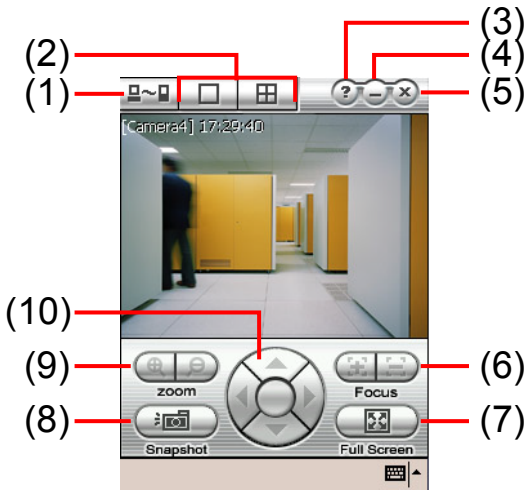
3. When the Download dialog box appears, enable **Open file after download** and click **Yes**.

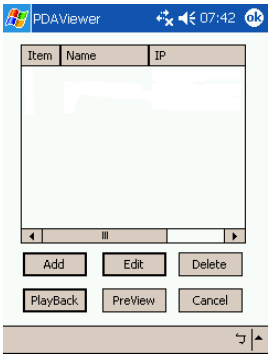
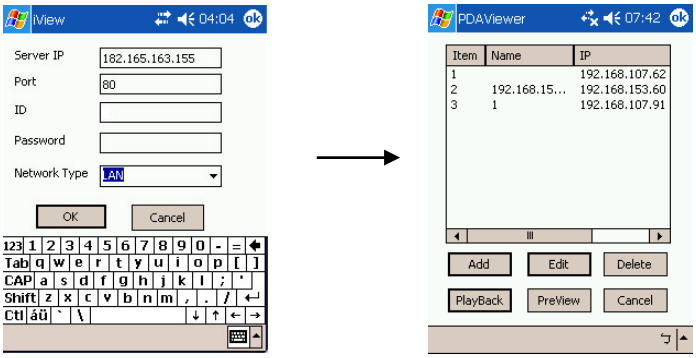


4. After the installation, the PDAViewer icon will appear in the Programs list.

8.1.3 To Use the PDAViewer

1. Run the **PDAViewer** in the Programs.
2. Familiarizing the PDAViewer buttons.



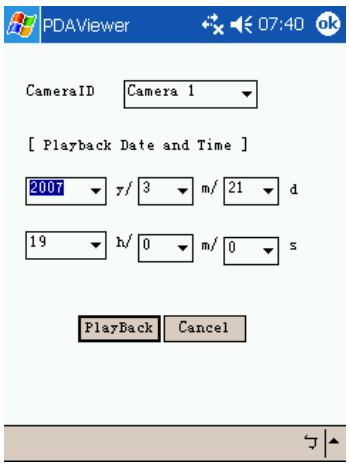
Name	Function
(1) Connect	Hook up to the DVR server. Make sure you are connected to internet. When the iView screen appears, click Add to add DVR server.  Enter the server IP, port, user ID, password and select the connection type. Then, click **OK**.  User can playback the recorded video from remote DVR server in PDAViewer.(see Chapter 8.1.4)
(2) Split Screen Mode	Select between 2 screen display types. It also allows you to switch and view different camera number or channels.
(3) About	Display the PDAViewer software version.
(4) Minimize	Reduce the size to taskbar.
(5) Exit	Close the PDAViewer.
(6) Focus	Adjust the focus of PTZ camera to produce clear image.
(7) Full Screen	Use the entire screen to only display the video.
(8) Snapshot	Capture and save the screen shot in *.bmp format.

Name	Function
(9) Zoom	Zoom in and out the PTZ camera image.
(10) Direction buttons	Adjust and position the focal point of the PTZ camera.

3. To change the video quality, enable/disable audio, and select to display different camera, tap on the video screen longer the popup menu will appear.

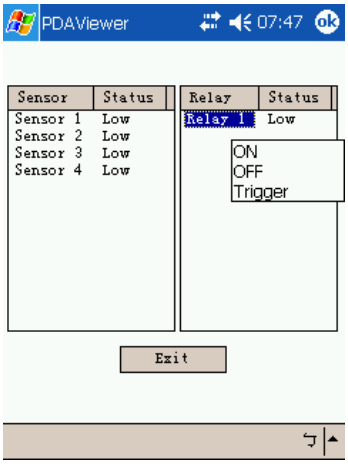
8.1.4 To Playback in PDAViewer

1. Run the **PDAViewer** in the Programs.
2. Hook up to the DVR server.
3. Click **Connect** icon and select the DVR server
4. Click **Playback** to enter playback option screen
5. Select the **camera**, **data**, and **time**
6. Click **Playback** to start playing the recorded video



7. While playback, user can view and change status of I/O devices
8. On the playback screen, tap on video screen longer the popup menu will appear
9. Select the **Remote IO**

10. The sensor and relay devices will list as below:



11. User can change the relay status. Select the relay and tap on video screen longer the popup menu will appear, and then, select the status (ON, OFF, Tigger)

8.2 Using JavaViewer to Access DVR Server

Using the mobile phone within Symbian Smart Phone OS to access the DVR through Internet. Make sure your mobile phone supports Symbian Smart Phone OS and can be connected to the internet. To use this feature, you need to install the JAVA Viewer program that it can be downloading it from the DVR server through the internet.

8.2.1 To install JAVAViewer from the DVR Server

1. Open the web browser and enter the DVR server IP (http://DVR server IP: port/JAVA-Viewer.html). Then click **Connect**.
2. When the Download screen appears, select **JAVA-Viewer.jad** and download it to your mobile phone.
3. After the installation, the JAVAViewer will be in your mobile phone system. To find the JAVAViewer program where is located, please refer to your mobile phone user's manual.

8.2.2 To Use the JAVAViewer

1. Run the JAVAViewer program.

2. Enter the DVR IP address, port number, user ID, and password. Please refer to your DVR server setting for that information.

3. And then, select the Connect to connect to DVR server.

4. Click **Yes** to accept the data from DVR server.

5. When connection is success, you will see the camera video on the screen.

6. To switch to different camera view, select menu and select the channel.

7. The JAVAViewer support PTZ control function, you can refer to **Help** file for detail function control key. Select **menu** and go the way down to select the **Help** file.

Appendix A Registering Domain Name

DDNS (Dynamic Domain Name Service) is a data query service mainly used on the Internet for translating domain names into Internet addresses. It allows remote clients to intelligently search dynamic servers without any previous enquiring for servers' Internet addresses.

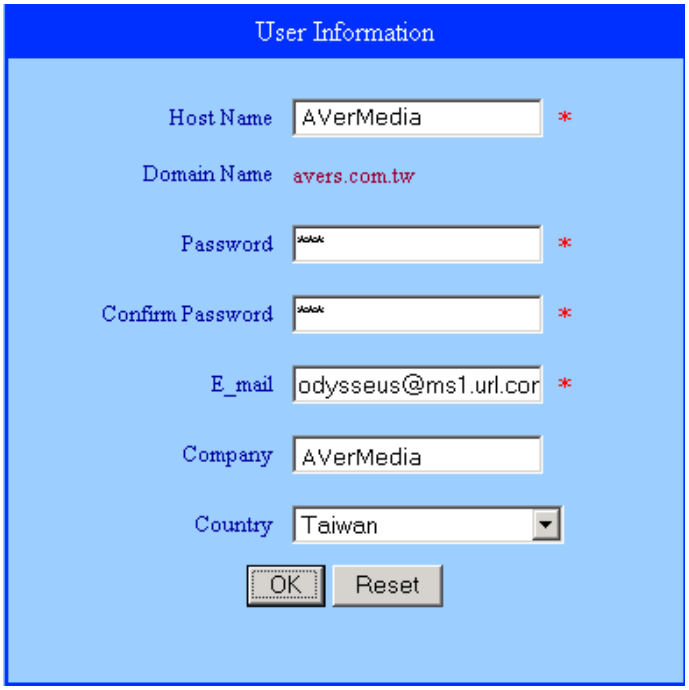
In order to take advantage of this intelligent service, first register your domain name on the following Web site **http://ddns.avers.com.tw**

1. **User Login**

   Browse the website **ddns.avers.com.tw** with Microsoft IE or Netscape Navigator to access the following dialog.

2. First input the CD-Key number and select the product name. Then click **OK** to login or **Reset** to clear the previous input.
3. **User Information**

   Please provide the following user information, **Host Name** (user can choose any name he/she likes except the one violence with other users), **Password**, **E-mail**, **Company**, and **Country**. And then, click **OK** to complete the domain name registration.



Appendix B Network Service Port

The following table shows the ports that DVR server uses for certain network service.

	Port#	Variable
Remote Console	5550	Y
WebViewer	80	Y
CM3000	80	Y
Firmware Update	5005	Y
DVR DDNS (Upload / Download)	53/1053	N

WARRANTY NOTICE

LIMITED WARRANTY

AVerMedia INFORMATION, Inc. warrants this product to be free of defects resulting from faulty manufacture or components under the following terms:

WARRANTY LENGTH

Labor is warranted for (1) one year from the date of purchase

Parts are warranted for (1) one year from the date of purchase

Replacement products will be warranted for the remainder of the one year warranty period or (30) thirty days, whichever is longer

WHO IS PROTECTED

This warranty is enforceable only by the first consumer purchaser

WHAT IS AND IS NOT COVERED

Except as specified below, this warranty covers all defects resulting from faulty manufacturing of this product. The following are not covered by the warranty.

1. Any product on which the serial number has been defaced, modified, or removed
2. Damage, deterioration, or malfunction resulting from:

   Accident, abuse, misuse, neglect, fire, water, lightning, or other acts of nature, commercial or industrial use, unauthorized product modification, or failure to follow instructions included with the product.

   Misapplication of service by someone other than the manufacturer's representative

   Any shipment damages (Claims must be made with carrier)

   Any other cause which does not relate to a product defect
3. Cartons, cases, batteries, cabinets, tapes, or accessories used with product
4. AVerMedia does not warrant that this product will meet your requirements; it is your responsibility to determine the suitability of this product for your purpose

WHAT WE WILL AND WILL NOT PAY FOR

We will pay labor and material expenses for covered items. However, we will not pay for the following:

1. Removal or installation charges
2. Shipping charges
3. Any incidental charges

EXCLUSION OF DAMAGES

THE MANUFACTURER'S SOLE OBLIGATION AND LIABILITY UNDER THIS WARRANTY IS LIMITED TO THE REPAIR OR REPLACEMENT OF A DEFECTIVE PRODUCT AT OUR OPTION. THE MANUFACTURER SHALL NOT, IN ANY EVENT, BE LIABLE TO THE PURCHASER OR ANY THIRD PARTY FOR ANY INCIDENTAL OR CONSEQUENTIAL DAMAGE (INCLUDING, BUT NOT LIMITED TO, DAMAGES RESULTING FROM INTERRUPTION OF SERVICE AND LOSS OF BUSINESS) OR LIABILITY IN TORT RELATING TO THIS PRODUCT OR RESULTING FROM ITS USE OR POSSESSION.

LIMITATIONS OF IMPLIED WARRANTIES

There are no other oral or written warranties, expressed or implied, including but not limited to those of merchantability or fitness for a particular purpose. Any implied warranties are limited in duration to one year from the date of purchase

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